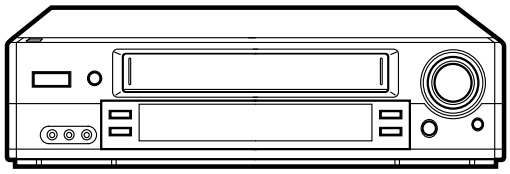
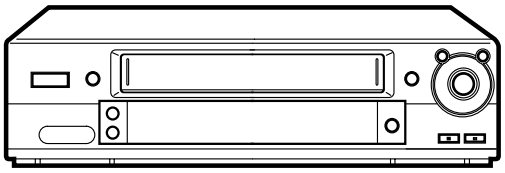
aiwa
SERVICE

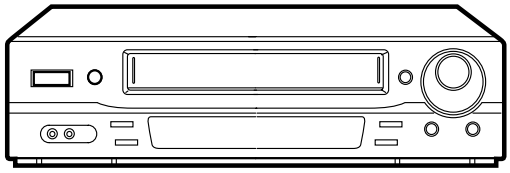
HV-FX7800 LE
HV-FX5850 LE
HV-FX4200 LE
HV-GX1400 LE
HV-GX1100 LE



HV-FX7800



HV-FX5850



HV-FX4200, GX1400, GX1100

SERVICE MANUAL

STEREO VIDEO CASSETTE RECORDER <7800/5850>
VIDEO CASSETTE RECORDER <4200/1400/1100>

BASIC VIDEO MECHANISM
: D33Y1-4HF/PAL(6721RF0450B)<7800,5850>
: D33Y1-4HD/PAL(6721RF0430B)<4200>
: D33Y1-2HD/PAL(6721RF0412A)<1400,1100>

aiwa

S/M Code No. 09-016-357-3N1

DATA

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SPECIFICATIONS

<HV-FX7800, FX5850, FX4200>

Video recording system	Rotary 2 head helical scanning system
Video head	Double azimuth 4 heads
Tuner system	Frequency synthesized tuner
TV system	B/G, L/L' SECAM, B/G PAL
Video signal system	SECAM/MESECAM/PAL color signal, 625 lines, 50 fields
Usable cssettes	VHS video cassettes
Recording/playback time	PAL/SECAM/MESECAM SP: 5 hours max. with E-300 tape. LP: 10 hours max. with E-300 tape NTSC (Playback only) SP: 3 hours 30 minutes max. with T-210 tape LP: 7 hours max. with T-210 tape EP: 10 hours 30 minutes max. with T-210 tape
Tape speed	PAL/SECAM/MESECAM SP: 23.39 mm/s LP: 11.69 mm/s NTSC (Playback only) SP: 33.35 mm/s LP: 16.67 mm/s EP: 11.12 mm/s
Rewind time:	Approx. 3 min. with E-180 tspe
Channel coverage	VHF-low: E02 to E12, E13 to E20 (SECAM) UHF: E21 to E69 CATV: S01 to S41
Video input	0.5 - 2.0 Vp-p, 75 ohm, unbalanced
Video output	1.0 Vp-p, 75 ohm, unbalanced
Horizontal resolution	240 lines (SP)
Video S/N	43 dB (SP)
Audio track	3 tracks (Hi-Fi sound 2 tracks, Normal sound 1 track) <FX7800, FX5850> 1 track (Normal sound) <FX4200>
Audio input	SCART: -6 dBm, more than 10 k ohm RCA: -6 dBm, more than 47 k ohm <FX7800, FX4200>
Audio output	SCART: -6 dBms, less than 1 k ohm RCA: -6 dBms, less than 1 k ohm <FX7800, FX5850>
Hi-Fi frequency response	20 Hz - 20 kHz <FX7800, FX5850>
Hi-Fi dynamic range	More than 87 dB (SP) <FX7800, FX5850>
Hi-Fi Wow & Flutter	Less than 0.01% (nominal) <FX7800, FX5850>
Operating temperature:	5 °C to 35 °C
Power requirements	200 - 240 V AC, 50 Hz
Power consumption	16 watts TYP 2.1 watts (power save mode.) <FX7800, FX5850> 13 watts TYP 3 watts (power save mode.) <FX4200>
Dimensions	360 (W) x 270 (D) x 94.5 (H) mm
Weight	Approx. 3.2 kg

<HV-GX1400, GX1100>

Video recording system	Rotary 2 head helical scanning system
Video head	2 heads
Tuner system	Frequency synthesized tuner
TV system	B/G, L/L' SECAM, B/G PAL
Video signal system	SECAM/MESECAM/PAL color signal, 625 lines, 50 fields
Usable cssettes	VHS video cassettes
Recording/playback time	PAL/SECAM/MESECAM 5 hours max. with E-300 tape. NTSC (Playback only) 3 hours 30 minutes max. with T-210 tape
Tape speed	PAL/SECAM/MESECAM 23.39 mm/s NTSC (Playback only) 33.35 mm/s
Rewind time:	Approx. 3 min. with E-180 tspe
Channel coverage	VHF-low: E02 to E12, E13 to E20 (SECAM) UHF: E21 to E69 CATV: S01 to S41
Video input	0.5 - 2.0 Vp-p, 75 ohm, unbalanced
Video output	1.0 Vp-p, 75 ohm, unbalanced
Horizontal resolution	240 lines (SP)
Video S/N	43 dBm (SP)
Audio track	1 track (Normal sound)
Audio input	SCART: -6 dBm, more than 10 k ohm RCA: -6 dBm, more than 47 k ohm <GX1400>
Audio output	SCART: -6 dBm, less than 1 k ohm
Operating temperature:	5 °C to 35 °C
Power requirements	200 - 240 V AC, 50 Hz
Power consumption	13 watts TYP 3 watts (power save mode.)
Dimensions	360 (W) x 270 (D) x 94.5 (H) mm
Weight	Approx. 3.2 kg

• Design and specifications are subject to change without notice.

ACCESSORIES LIST -1/1

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
1	S8-35R-P00-66J		INSTRUCTION ASSY CFA929NS<78>
1	S8-35R-P00-66H		INSTRUCTION ASSY CFA911NS<58>
1	S8-35R-P00-66B		INSTRUCTION ASSY CCA201S<11>
1	S8-35R-P00-66C		INSTRUCTION ASSY CCA204S<14>
1	S8-35R-P00-66F		INSTRUCTION ASSY CCA404S<42>
2	S7-11R-KP0-33K		REMOTE CONTROLLER ASSY,CFA929N<78>
2	S7-11R-KP0-33L		REMOTE CONTROLLER ASSY,CFA911N<58>
2	S7-11R-KP0-33P		REMOTE CONTROLLER ASSY,CCA201S<11>
2	S7-11R-KP0-33N		REMOTE CONTROLLER ASSY,CCA204S<14>
2	S7-11R-KP0-33M		REMOTE CONTROLLER ASSY,CCA404S<42>
3	S8-50R-CAA-260		CABLE,COAXIAL 1200M/M
4	S8-51R-P00-03A		CABLE ASSY,RF/SCART/RCA USI<78,58>
4	S8-610-45F-000		CABLE,COAXIAL 1.2M/M<11,14,42>
5	S6-11R-2G0-01A		PLUG ASSY 2WAY RED/WHITE<78,58>

TYPE	MODEL NAME	SUFFIX
<78>	HV-FX7800	LE
<58>	HV-FX5850	LE
<42>	HV-FX4200	LE
<14>	HV-GX1400	LE
<11>	HV-GX1100	LE

DISASSEMBLY INSTRUCTIONS -1/1

1. Top Case Removal

1) Remove 4 screws holding the top case.

2. Panel Front Removal (see Fig. 1)

1) Release 7 tabs, and then remove the panel front.

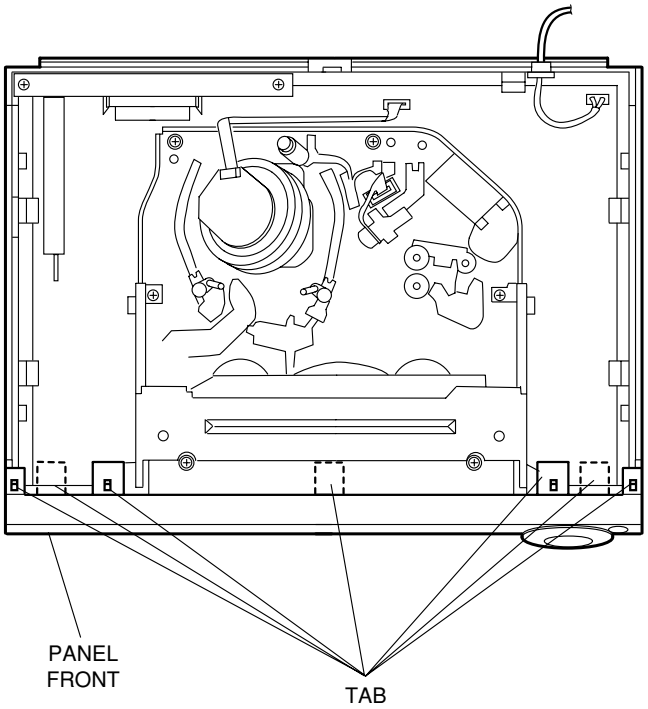


Fig. 1

3. Key1 C.B. and Key2 C.B. Removal (see Fig. 2)

1) Release 2 tabs, and then remove Key1 C.B. from the connector (PKM02) in the direction of arrow ①.
2) Release the tab, and then remove Key2 C.B. from the connector (PKM01) in the direction of arrow ②.

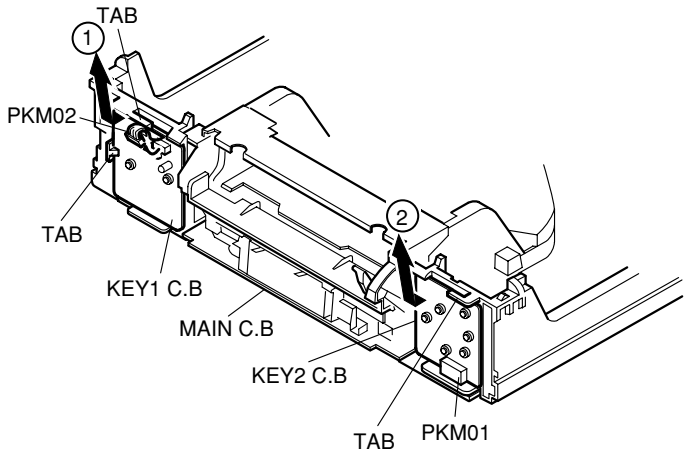


Fig. 2

4. Mechanism Removal (see Fig. 3)

1) Disconnect the drum FF cable from the connector (PMD01) on the Main C.B.
2) Disconnect the ACE head FF cable from the connector (P3D02) on the Main C.B.
3) Remove 6 screws Ⓐ.

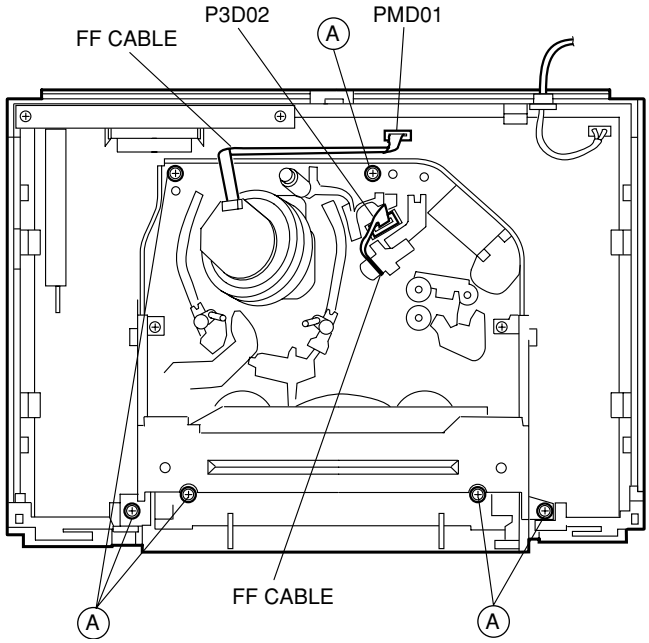


Fig. 3

5. Main C.B. Removal (see Fig. 4)

1) Remove 2 screws Ⓑ holding the panel assy, distri-butor.
2) Release 5 tabs, and then simultaneously lift the panel assembly, distributor and Main C.B. to remove them.

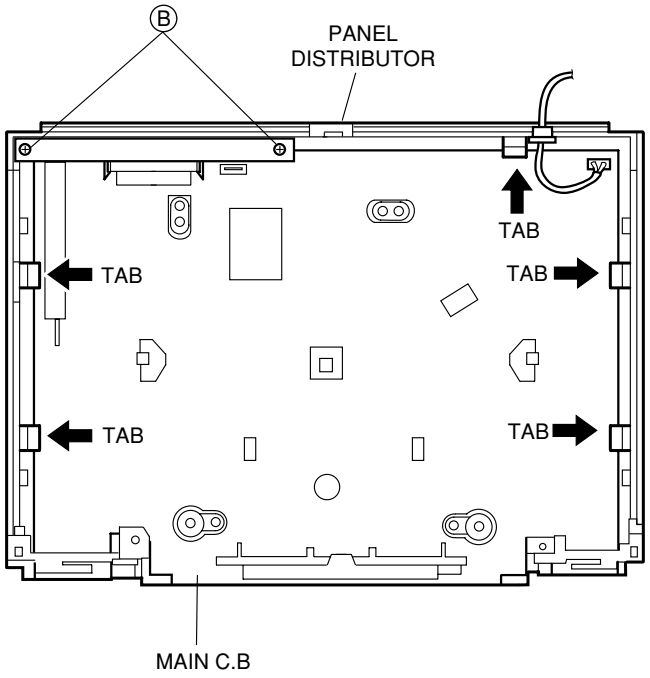
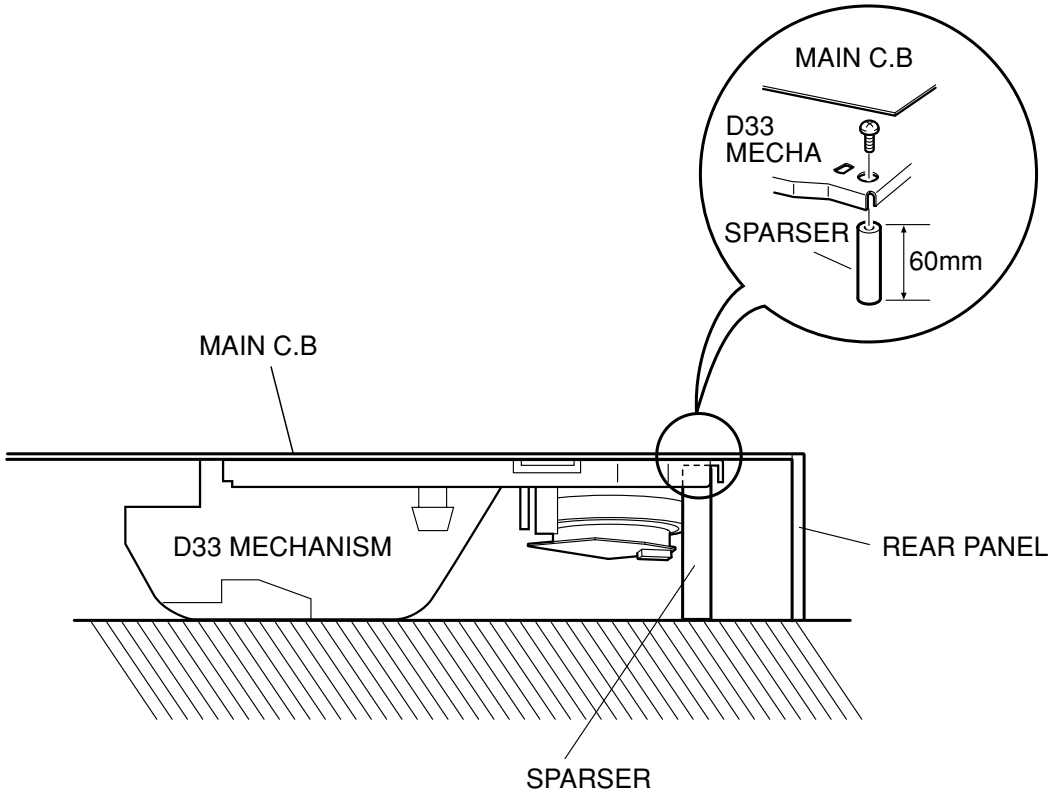


Fig. 4

SERVICE POSITION -1/1

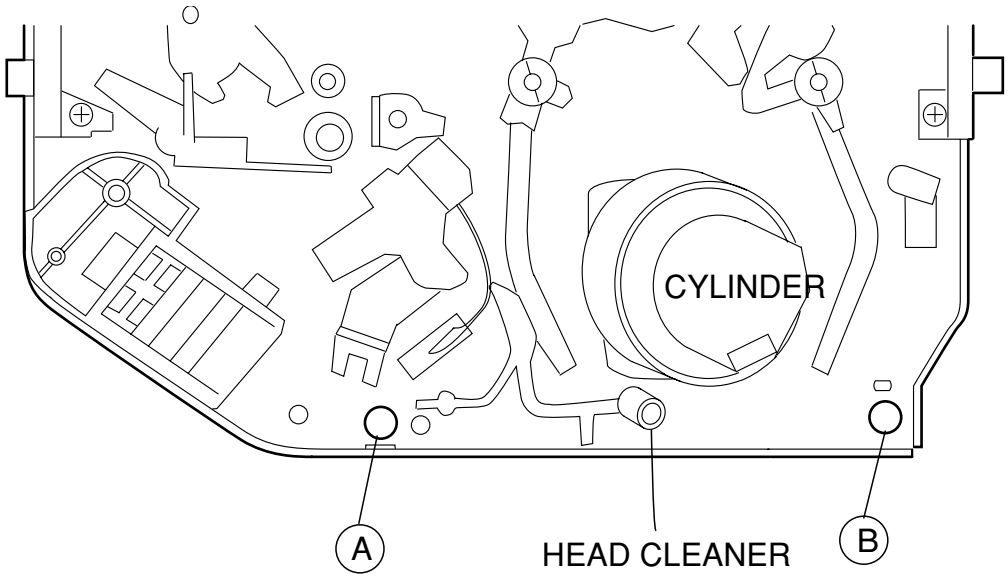
To set the mechanism to the service position in active status:

Insert a spacer as shown below: The service position can be set in the stable status without any defective contact.



Location

Install spacers at locations (A) and (B).



Top View

VCR TEST TAPE INTERCHANGEABILITY TABLE

There are two types of the new allgnment tape CH-1B (for NTSC) and CH-2 (for PAL). On each tape four signals (1)-(4) are recorded for the times and in the order shown below.

(1) : 8min. → (2) : 2min. → (3) : 5min. → (4) : 5min.

The TTV-MP1 (for M-PAL), TTV-MS1 (for MESECAM) and TTV-S1 (for SECAM) allgnment tapes have the same contents as the previous tapes.

Method	Now in use TYPE		New TYPE		Application
	Model	Contents *1	Model	Contents *1	
NTSC	TTV-N1	NTSC, Color bar, 1 kHz, SP	CH-1B(2)	NTSC, Stairsteps, 1 kHz, SP	PB-Y Level/General electrical ADJ. Head ACE Height/Tilt ADJ.
	TTV-NS1	NTSC, Color bar, 1 kHz, SP	No Changed.		For S-VHS (SQPB) check
	TTV-N1E	NTSC, Color bar, 1 kHz, EP	CH-1B(4) *2	NTSC, Color bar, 1 kHz, EP	Switching position ADJ.
	TTV-NS6E	NTSC, Color bar, No sound, EP	No Changed.		For S-VHS (SQPB) check
	TTV-N2	NTSC, Stairsteps, 7 kHz, SP	CH-1B(1)	NTSC, Stairsteps, 7 kHz, SP	Head ACE Azimuth ADJ.
	TTV-N12 (SCV-1998)	NTSC, Color bar, 1 kHz, SP	CH-1B(4)	NTSC, Color bar, 1 kHz, EP	FM Envelope ADJ. X-Value ADJ.
	TTV-N6 (TTV-N06T)	NTSC, Mono scope, 7 kHz, SP	No Changed.		For total picture quality check (resolution, etc)
	TTV-N7A	NTSC, Stairsteps, 1 kHz, SP, HiFi 400 Hz	CH-1B(3)	NTSC, Color bar, No sound SP, HiFi 400 Hz	HiFi Audio PB Level ADJ.
PAL	TTV-P1	PAL, Color bar, 1 kHz, SP	CH-2 (2) * 3	PAL, Stairsteps, 1 kHz, SP	Switching position ADJ. PB-Y Level/General electrical ADJ. Head ACE Height/Tilt ADJ.
	TTV-P1L	PAL, Color bar, 1 kHz, LP	CH-2 (4)	PAL, Color bar, 1 kHz, LP	Switching position. (LP Model) FM Envelope ADJ. (LP Model) X-Value ADJ. (LP Model)
	TTV-P2	PAL, Stairsteps, 6 kHz, SP	CH-2 (1)	PAL, Stairsteps, 6 kHz, SP	HEAD ACE Azimuth ADJ. FM Envelope ADJ. (SP Model) X-Value ADJ. (SP Model)
	TTV-P6 (TTV-N06T)	PAL, Monoscope, 6 kHz, SP	No Changed.		For total picture quality check (resolution, etc)
	TTV-P7	PAL, Stairsteps, 1 kHz, SP, HiFi 1 kHz	CH-2 (3)	PAL, Color bar, No sound SP, HiFi400 Hz	HiFi Audio PB Level ADJ.
	TTV-P16	PAL, Color bar, 400 Hz, SP, HiFi 1 kHz	No Changed.		FM Filter ADJ.

* 1. Described in the order of color format. video signal. linear audio. tape speed and Hi-Fi audio.
* 2. Use CH-1B (1)-(3) with models used exclusively in the SP mode.
* 3. Use CH-2 (3) and (4) when it is necessary to observe the chroma signal.

ELECTRICAL MAIN PARTS LIST -1/3

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
IC			
	SI-CS2-416-00B		IC,CAT24W16P
	SI-FA8-082-00A		IC,FAN8082 8P
	SI-MCR-HI0-08A		IC,HD6432197A37FX
	SI-KE4-310-00A		IC,KIA431 3P
	SI-KE7-031-00A		IC,KIA7031P
	87-001-196-010		IC,KIA7042P
	SI-SA7-159-80B		IC,LA71598HM
	SI-SA7-479-30A		IC,LC74793<78,58>
	SI-MT1-443-00A		IC,MM1443XJ
	SI-IT3-417-00B		IC,MSP3417D-QG<78,58>
⚠	SI-PMG-SK0-01A		IC,STR-G6351L
	SI-TO1-238-00E		IC,TA1238F
	SI-PH9-605-00A		IC,TDA9605H<78,58>
	SI-NE1-631-10A		IC,UPD16311GC-AB6<78,58>
⚠	S5-00R-DB0-11A		SENSOR,PHOTO KP1010
TRANSISTOR			
	ST-R19-800-9CA		TR,2SA1980G
	ST-R53-430-9BA		TR,2SC5343-L
	ST-R53-440-9AA		TR,2SC5344Y
	ST-R10-030-9AA		TR,KSR1003
	ST-R12-680-9BA		TR,KTA1268-BL
	ST-R12-730-9AA		TR,KTA1273-TP-Y
	S7-A30-293-010		TR,KTC2804-Y
	ST-R32-050-9AB		TR,KTC3205-TP-Y
	ST-R22-030-9AF		TR,SRA2203
	ST-R12-010-9AC		TR,SRC1201 4.7K,
	ST-R12-030-9AE		TR,SRC1203
DIODE			
	SD-R15-822-0AA		DIODE,1N5822
	87-020-465-080		DIODE,1SS133
	SD-R18-020-9AA		DIODE,ERA18-02KFRB
	87-357-529-310		DIODE,ERA22-10
	SD-R20-200-0AB		DIODE,HER202 BK
	SD-R10-400-9AB		DIODE,RL104
	SD-R10-400-9BA		DIODE,RL104F
	87-070-173-010		DIODE,S1WBA60
MAIN C.B			
⚠C101	S6-240-88F-000		CAP,PCX2 275V 0.1UF,M
⚠C102	S6-240-88F-000		CAP,PCX2 275V 0.1UF,M
⚠C103	SC-E47-6CU-611		CAP,E 47UF-400V
⚠C105	87-016-375-010		CAP,0.01UF-630V
⚠C106	S6-240-87A-000		HIGH VOL 150P-1KV
C109	87-010-415-010		CAP,10M-50V
⚠C112	87-012-379-010		CAP,3300PF-400V
⚠C113	SA-1B3-0KH-2M0		CAP,220PF-400V
C116	SC-E10-86F-6CM		CAP,E 1000UF-16V M FM5 BU
C117	87-010-375-080		CAP,E 330-10V
C118	SC-E22-73D-638		CAP,E 220-10V<78,58>
C120	87-016-134-080		CAP,E 470UF-25V M FM
C121	87-016-585-080		CAP,E 330UF-25V
C151	87-015-681-080		CAP,E 10-16V
C153	87-015-684-080		CAP,E 47-16V
C201	87-010-402-040		CAP,E 2.2-50V
C203	87-010-400-080		CAP,E 0.47-50V
C206	87-010-400-080		CAP,E 0.47-50V
C208	87-015-695-080		CAP,E 1.0-50V
C213	87-010-402-040		CAP,E 2.2-50V
C303	87-015-695-080		CAP,E 1.0-50V
C304	87-015-684-080		CAP,E 47-16V
C310	87-015-698-080		CAP,E 4.7-50V
C315	87-015-681-080		CAP,E 10-16V
C316	87-015-681-080		CAP,E 10-16V
C318	87-015-695-080		CAP,E 1.0-50V
C320	87-015-695-080		CAP,E 1.0-50V
C322	87-015-684-080		CAP,E 47-16V
C325	87-015-695-080		CAP,E 1.0-50V
C326	87-015-681-080		CAP,E 10-16V
C327	87-015-681-080		CAP,E 10-16V
C333	87-015-681-080		CAP,E 10-16V
C337	87-015-698-080		CAP,E 4.7-50V
C339	87-015-698-080		CAP,E 4.7-50V
C346	87-015-684-080		CAP,E 47-16V
C348	87-015-695-080		CAP,E 1.0-50V
C354	87-015-684-080		CAP,E 47-16V
C358	87-015-695-080		CAP,E 1.0-50V
C374	87-015-684-080		CAP,E 47-16V
C376	87-015-681-080		CAP,E 10-16V
C377	87-015-681-080		CAP,E 10-16V
C379	87-010-403-040		CAP,E 3.3-50V
C386	87-010-552-040		CAP,E 22-16V
C389	87-015-698-080		CAP,E 4.7-50V
C390	87-010-552-040		CAP,E 22-16V
C392	87-010-408-040		CAP,E 47UF-50V
C500	87-016-040-080		CAP,0.047F-5.5V<EXCEPT 78>
C502	87-015-684-080		CAP,E 47-16V
C503	87-016-088-040		CAP,E 220-6.3V
C504	87-016-088-040		CAP,E 220-6.3V
C505	87-015-684-080		CAP,E 47-16V
C510	87-016-088-040		CAP,E 220-6.3V
C523	87-010-402-040		CAP,E 2.2-50V
C524	87-015-684-080		CAP,E 47-16V
C525	87-016-088-040		CAP,E 220-6.3V
C526	87-016-130-080		CAP,47-25V
C530	87-015-681-080		CAP,E 10-16V
C531	87-016-573-080		CAP,E 1000UF-6.3V
C534	87-015-698-080		CAP,E 4.7-50V
C535	87-015-698-080		CAP,E 4.7-50V
C546	87-016-130-080		CAP,47-25V
C561	87-016-088-040		CAP,E 220-6.3V
C5A5	87-015-695-080		CAP,E 1.0-50V
C5F2	87-010-408-040		CAP,E 47UF-50V<78,58>
C5F3	SC-E22-73D-638		CAP,E 220-10V<78,58>
C5F7	87-015-681-080		CAP,E 10-16V
C5G1	87-016-573-080		CAP,E 1000UF-6.3V<11,14,42>
C5P9	87-015-698-080		CAP,E 4.7-50V<78,58>
C700	87-016-455-080		CAP,E 470UF-6.3V<78,58>
C701	87-015-698-080		CAP,E 4.7-50V
C703	87-015-681-080		CAP,E 10-16V
C704	87-015-684-080		CAP,E 47-16V
C706	87-016-455-080		CAP,E 470UF-6.3V
C7S1	87-010-265-080		CAP,E 33-16V
C7V1	87-015-684-080		CAP,E 47-16V<78>
C7V6	87-015-698-080		CAP,E 4.7-50V<78>
C7V7	87-015-695-080		CAP,E 1.0-50V<78>
C7V8	87-015-695-080		CAP,E 1.0-50V<78>
C806	87-015-698-080		CAP,E 4.7-50V<78,58>
C807	87-015-698-080		CAP,E 4.7-50V<78,58>
C810	87-015-681-080		CAP,E 10-16V<78,58>
C811	87-015-681-080		CAP,E 10-16V<78,58>
C813	87-015-681-080		CAP,E 10-16V<78,58>
C814	87-015-681-080		CAP,E 10-16V<78,58>
C815	87-015-681-080		CAP,E 10-16V<78,58>
C816	87-015-681-080		CAP,E 10-16V<78,58>
C817	87-015-681-080		CAP,E 10-16V<78,58>
C818	87-015-698-080		CAP,E 4.7-50V<78,58>
C819	87-015-681-080		CAP,E 10-16V<78,58>
C821	87-015-684-080		CAP,E 47-16V<78,58>
C822	87-015-681-080		CAP,E 10-16V<78,58>
C823	87-015-681-080		CAP,E 10-16V<78,58>
C824	87-015-681-080		CAP,E 10-16V<78,58>
C825	87-015-684-080		CAP,E 47-16V<78,58>
C827	87-015-681-080		CAP,E 10-16V<78,58>

ELECTRICAL MAIN PARTS LIST -2/3

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
C828	87-015-684-080		CAP,E 47-16V<78,58>
C832	87-015-684-080		CAP,E 47-16V<78,58>
C835	87-010-400-080		CAP,E 0.47-50V<78,58>
C902	87-016-577-080		CAP,E 470UF-16V
C912	87-016-577-080		CAP,E 470UF-16V
C956	87-015-695-080		CAP,E 1.0-50V
C960	87-015-695-080		CAP,E 1.0-50V
C961	87-015-695-080		CAP,E 1.0-50V
C962	87-015-695-080		CAP,E 1.0-50V
C963	87-010-552-040		CAP,E 22-16V
C964	87-015-695-080		CAP,E 1.0-50V
C9A1	87-015-695-080		CAP,E 1.0-50V<11,14,42>
C9A2	87-015-695-080		CAP,E 1.0-50V<11,14,42>
C9A3	87-015-695-080		CAP,E 1.0-50V<11,14,42>
C9A5	87-015-681-080		CAP,E 10-16V<11,14,42>
C9A6	87-015-681-080		CAP,E 10-16V<11,14,42>
C9A7	87-015-681-080		CAP,E 10-16V<11,14,42>
C9F7	87-015-695-080		CAP,E 1.0-50V<78,14,42>
CS501	S6-00R-DB0-04C		SW,MPU10252MLB4 MIC
DIG501	S3-02R-1N0-03A		DH 9MT168GK<78,58>
ES501	S9-31R-001-6C0		HOLDER ASSY END(DI-CKD)LOCAL
ES502	S9-31R-001-6C0		HOLDER ASSY END(DI-CKD)LOCAL
⚠F101	S5-850-11T-000		FUSE,1600MA 250V
⚠F102	87-001-196-010		ICP-N10 T104<78,58>
⚠FH1	S5-860-08B-000		HOLDER,FUSE CLIP
⚠FH2	S5-860-08B-000		HOLDER,FUSE CLIP
FL301	S6-330-32K-000		COIL,OSC BIAS 1CHIP 5V
J101	S6-360-04C-000		COIL,BFS3550R2FD8
JK801	S6-12R-C00-2C0		JACK,RCA RCA-208C-06<78,58>
JK901	S6-20R-M00-02A		SOCKET 2F-21P
⚠L102	S6-161-45H-000		FILTER SHT LFS2020V4-04350
L103	S6-330-88G-000		COIL,CHOCK TP 5MM
L104	S6-330-88G-000		COIL,CHOCK TP 5MM
L105	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<78,58>
L301	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH
L302	87-003-286-080		COIL,56 2.3-3.4-5
L303	87-003-286-080		COIL,56 2.3-3.4-5<11,14>
L303	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<78,58,42>
L305	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH
L306	SL-R10-00K-0P5		INDUCTOR,RADIAL LEAD LF7.5N OE
L307	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH
L308	87-005-440-080		COIL,47M 6-6-5
L310	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH
L503	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH
L504	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH
L505	87-005-455-080		COIL,820 6-6-5
L506	87-005-686-080		COIL,15UH
L5F1	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH<78,58>
L5G1	87-005-126-080		COIL,470M 6-6-5<11,14,42>
L5S1	87-003-148-080		INDUCTOR,33
L702	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH
L703	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH
L704	87-003-145-080		INDUCTOR,8.2
L7V1	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH<78>
L801	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH<78,58>
L8R1	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<78,58>
L8R2	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<78,58>
L901	87-003-152-080		INDUCTOR,100M 2.3-3.4-5
L902	87-003-152-080		INDUCTOR,100M 2.3-3.4-5
L904	87-003-152-080		INDUCTOR,100M 2.3-3.4-5
L905	S6-360-04C-000		COIL,BFS3550R2FD8
L906	87-003-152-080		INDUCTOR,100M 2.3-3.4-5
L907	S6-360-04C-000		COIL,BFS3550R2FD8
L911	87-003-152-080		INDUCTOR,100M 2.3-3.4-5
L912	87-003-152-080		INDUCTOR,100M 2.3-3.4-5
L914	87-003-152-080		INDUCTOR,100M 2.3-3.4-5
L916	87-003-152-080		INDUCTOR,100M 2.3-3.4-5
LD501	S9-31R-001-7C0		HOLDER ASSY LED(DI-CKD)LOCAL
LED501	S3-01R-1U0-02B		LED ASSY LTG-9935M-1<11,14,42>
MS501	S6-00R-PY0-01B		SW,MMS00420ZMBO MIC

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
P3D01	S5-612-34W-000		GF120-10S-TS-A LGC 10P MP<78,58>
P3D01	S5-612-34Y-000		CONN,6P<42>
P3D01	S5-612-34Z-000		CONN,3P<11,14>
P3D02	S6-30R-5S0-10A		CONN,6P
P3D03	S5-612-51B-000		GB201-2P-TS-B(LGC) P
PMC01	S6-30R-BE0-1H0		CONN,8P
PMD01	S5-612-34D-000		CONNECTOR (CIRC),FFC/FPC
PMK01	S5-618-43D-000		CONN,TUC-P05P 5P
PMK02	S6-724-34B-000		CONN ASSY 5P-150<58,11>
PMK02	S6-724-34M-000		CONN ASSY 10P-150<78,14,42>
PML01	S6-30R-2S0-11A		CONN,2P
⚠PW101	S5-612-92B-000		GP390 LGC 3P STRAIG P
⚠R101	S6-140-07A-000		RES,CEM 2.7/2W
R104	SR-S56-02K-619		RES,56K-2W
R109	SR-S03-50K-619		RES,0.35-2W
R/C5F1	S7-12R-193-8GA		REMOTE CONTROLLER RECEI<11,14,42>
R/C5F1	S7-12R-293-8GA		REMOCON RECEIVER<78,58>
RS501	S5-00R-AB0-02A		SENSOR GP1S566
RS502	S5-00R-AB0-02A		SENSOR GP1S566
⚠T101	S6-420-24D-000		TRANSFORMER,SMPS
TU701	S7-00R-PL0-1A0		TUNER TADC-S101D SECAM 3IN1
W101	87-005-440-080		COIL,47M 6-6-5<78,58>
X201	S2-02R-242-8BC		CRYSTAL,H49U KJE 4.2862300MH<42>
X301	S2-02R-244-3AC		CRYSTAL,STANDARD H49U 4.433709
X501	S2-02R-310-01E		X'TAL,10.0000MHZ
X502	S5-290-01K-000		X'TAL,32.768KHZ
X503	S2-02R-317-71G		CRYSTAL ATS(=31771E)
ZD104	SD-Z56-260-9AA		ZENER,GDZJ5.6B 26MM TP<78,58>
ZD151	S9-7U0-130-1C0		ZENER,MTZ13C
ZD501	SD-Z62-260-9CA		ZENER,GDZJ6.2C 26MM
ZD503	SD-Z62-260-9CA		ZENER,GDZJ6.2C 26MM
ZD701	87-002-743-080		ZENER,MTZ33B
ZD801	SD-Z51-000-9AJ		ZENER,GDZJ5.1B TP<78,58>
ZD802	SD-Z56-260-9AA		ZENER,GDZJ5.6B 26MM TP<78,58>
ZD803	SD-Z13-000-9AA		ZENER,MTZ13A<78,58>
ZD804	SD-Z13-000-9AA		ZENER,MTZ13A<78,58>
ZD805	SD-Z51-000-9AJ		ZENER,GDZJ5.1B TP<78,58>
ZD806	SD-Z51-000-9AJ		ZENER,GDZJ5.1B TP<78,58>

NICAM/A2 C.B<78,58>

C751	87-015-684-080		CAP,E 47-16V<78,58>
C757	87-015-684-080		CAP,E 47-16V<78,58>
C758	87-015-681-080		CAP,E 10-16V<78,58>
C759	87-015-681-080		CAP,E 10-16V<78,58>
C762	SC-Q39-21N-409		CAP,0.0039U 100V<78,58>
C763	SC-Q39-21N-409		CAP,0.0039U 100V<78,58>
C766	87-010-403-040		CAP,E 3.3-50V<78,58>
C769	87-015-681-080		CAP,E 10-16V<78,58>
C770	87-015-684-080		CAP,E 47-16V<78,58>
L751	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH<78,58>
L752	87-005-196-080		INDUCTOR,10<78,58>
L753	SL-R01-02K-0P5		INDUCTOR,RADIAL LEAD 10UH<78,58>
L754	87-003-129-080		INDUCTOR,6800<78,58>
L755	87-003-129-080		INDUCTOR,6800<78,58>
P7M01	S5-618-48F-000		CABLE 2P<78,58>
P7M02	S5-618-48F-000		CABLE 2P<78,58>
X751	S5-290-219-000		X'TAL 18.432MHZ<78,58>

KEY-1 C.B

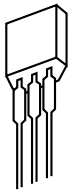
BD981	S6-360-04C-000		COIL,BFS3550R2FD8<78,14,42>
JK901	S5-720-34S-000		JACK,ST 2P(YL)<78,14,42>
JK902	S5-720-34R-000		JACK,ST 2P(WHT)<78,14,42>
JK903	S5-720-34Q-000		JACK,ST 2P(RED)<78>
L901	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<78>
L902	87-003-152-080		INDUCTOR,100M 2.3-3.4-5<78,14,42>
LED902	SD-L53-110-0AA		LED,SG5311(GRN)
PKM02	S5-610-36D-000		MA V 8283-0512 WH ELCO<58,11>
PKM02	S5-610-36I-000		CONN,8283-1012 WH ELCO<78,14,42>

ELECTRICAL MAIN PARTS LIST -3/3

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
SW901	S5-562-82C-000		SW,SKQNQED ALPS 5MM
SW902	S5-562-82C-000		SW,SKQNQED ALPS 5MM
SW903	S5-562-82C-000		SW,SKQNQED ALPS 5MM
SW904	S5-562-82C-000		SW,SKQNQED ALPS 5MM
KEY-2 C.B			
PKM01	S5-618-44D-000		CONN,5P
SW905	S5-562-82C-000		SW,SKQNQED ALPS 5MM
SW906	S5-562-82C-000		SW,SKQNQED ALPS 5MM
SW907	S5-562-82C-000		SW,SKQNQED ALPS 5MM
SW908	S5-562-82C-000		SW,SKQNQED ALPS 5MM
SW909	S5-562-82C-000		SW,SKQNQED ALPS 5MM
SW910	S5-562-82C-000		SW,SKQNQED ALPS 5MM
SW911	S5-562-82C-000		SW,SKQNQED ALPS 5MM

TYPE	MODEL NAME	SUFFIX
<78>	HV-FX7800	LE
<58>	HV-FX5850	LE
<42>	HV-FX4200	LE
<14>	HV-GX1400	LE
<11>	HV-GX1100	LE

TRNSISTOR ILLUSTRATION -1/1

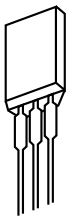


E C B

KTA1267
SRA2203
SRC1203

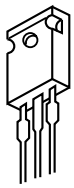
E C B

2SA1980
2SC5343
2SC5344
KSR1003
KTA1268
SRC1201



E C B

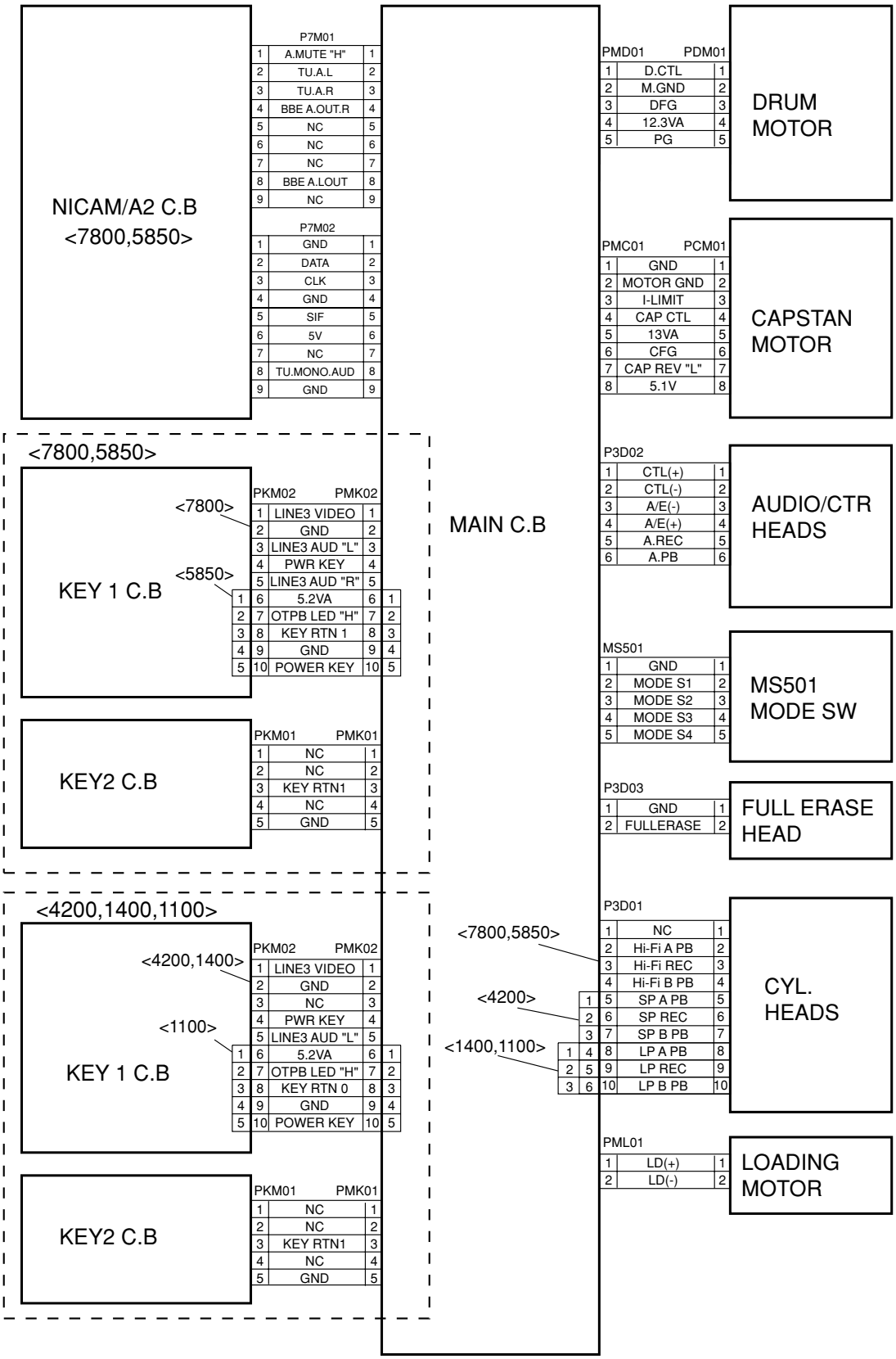
KTC3205



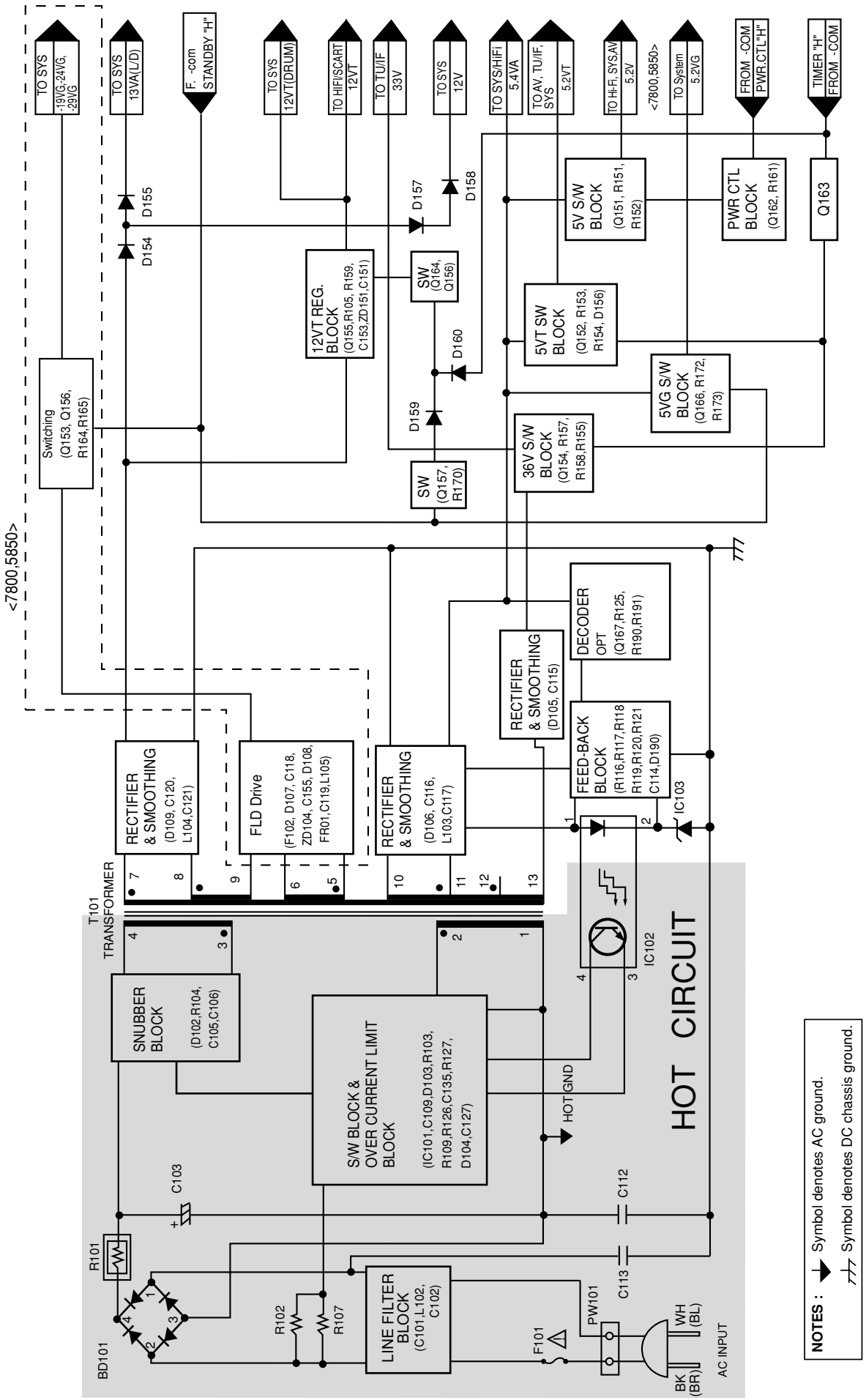
E C B

KTC2804

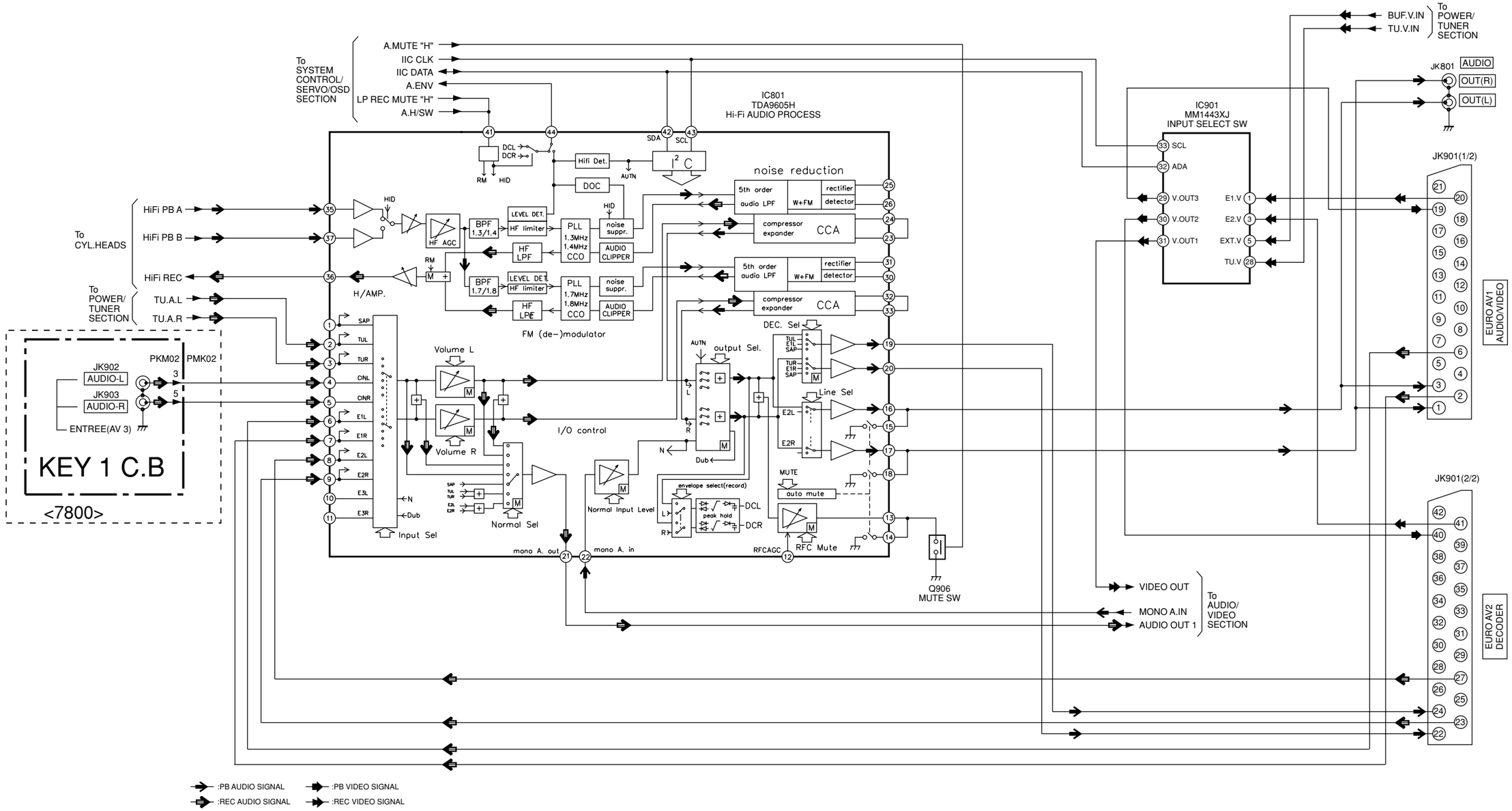
WIRE HARENESS DIAGRAM -1/1



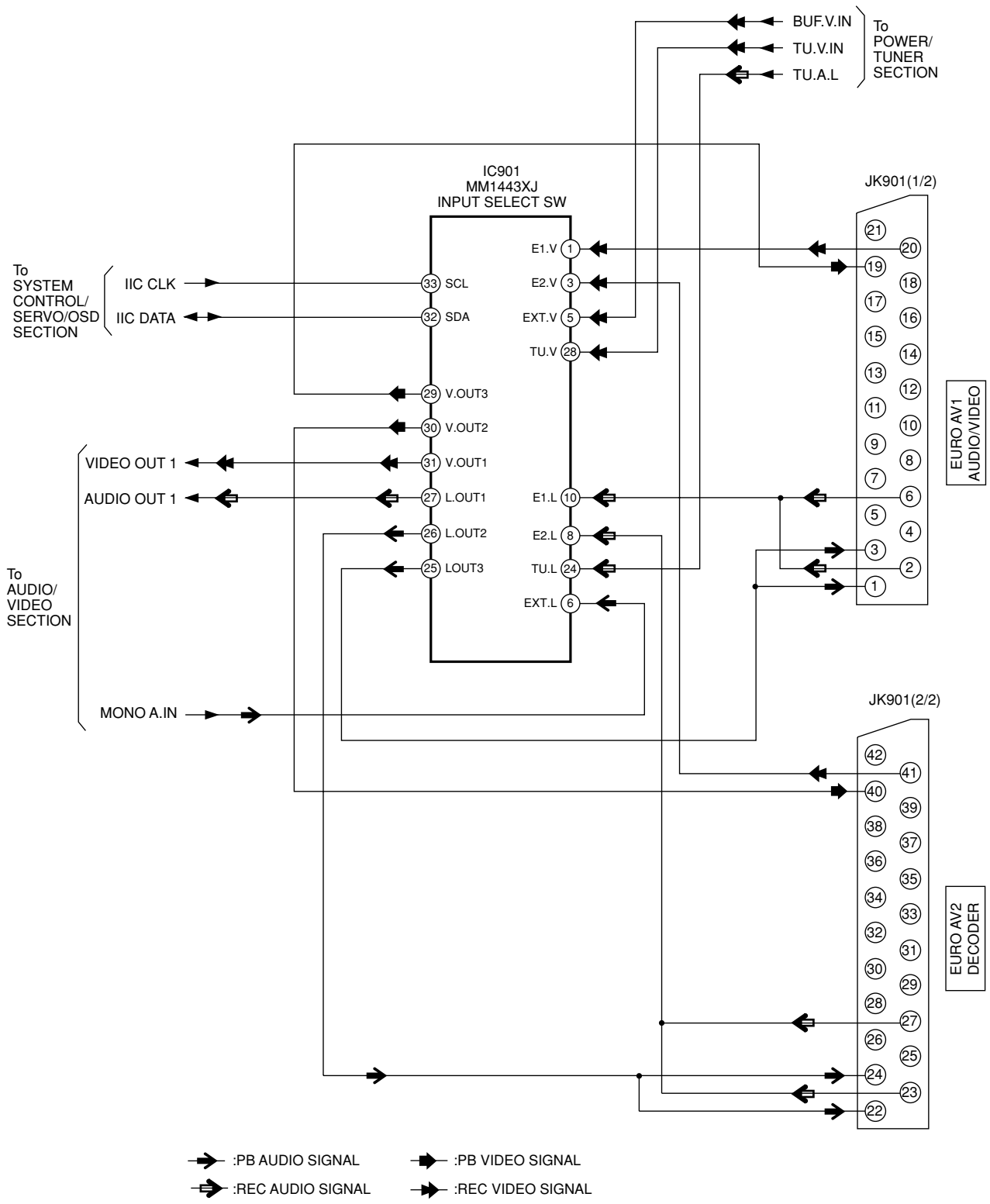
BLOCK DIAGRAM -1/8 (POWER SECTION)



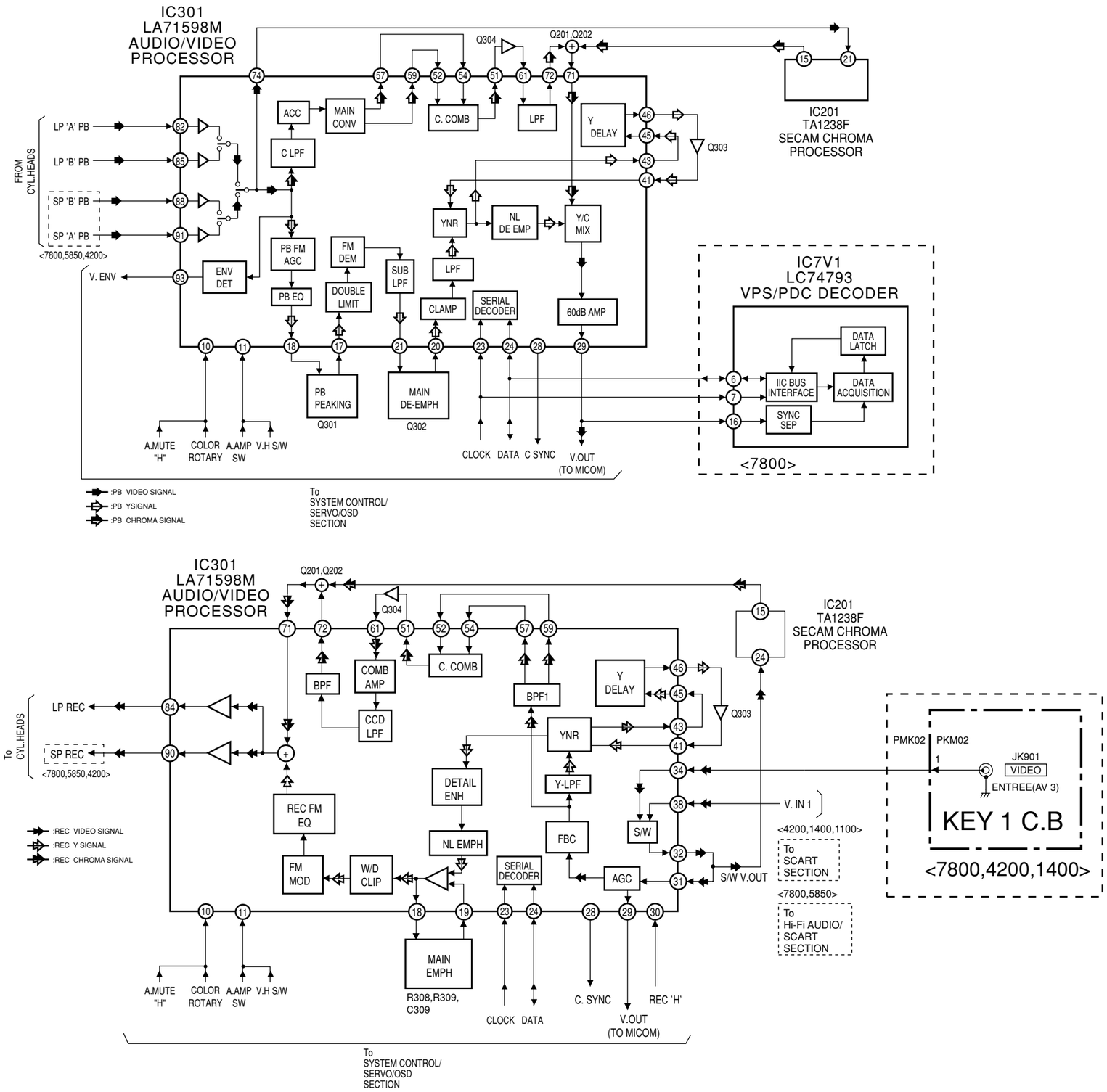
BLOCK DIAGRAM -2/8 (AUDIO/VIDEO SECTION) <HV-FX7800/FX5850>



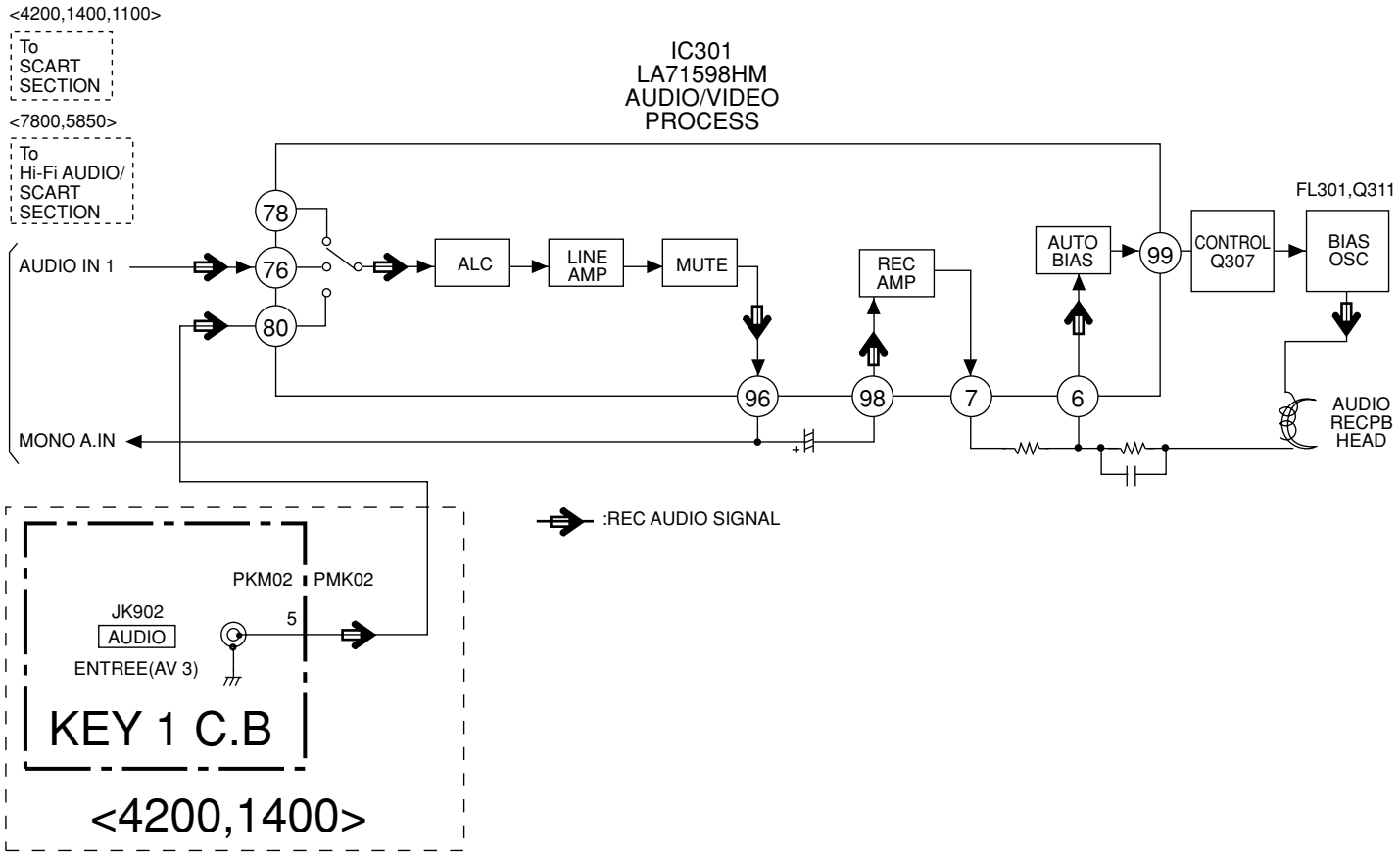
BLOCK DIAGRAM -3/8 (AUDIO/VIDEO SECTION) <HV-FX4200/GX1400/GX1100>

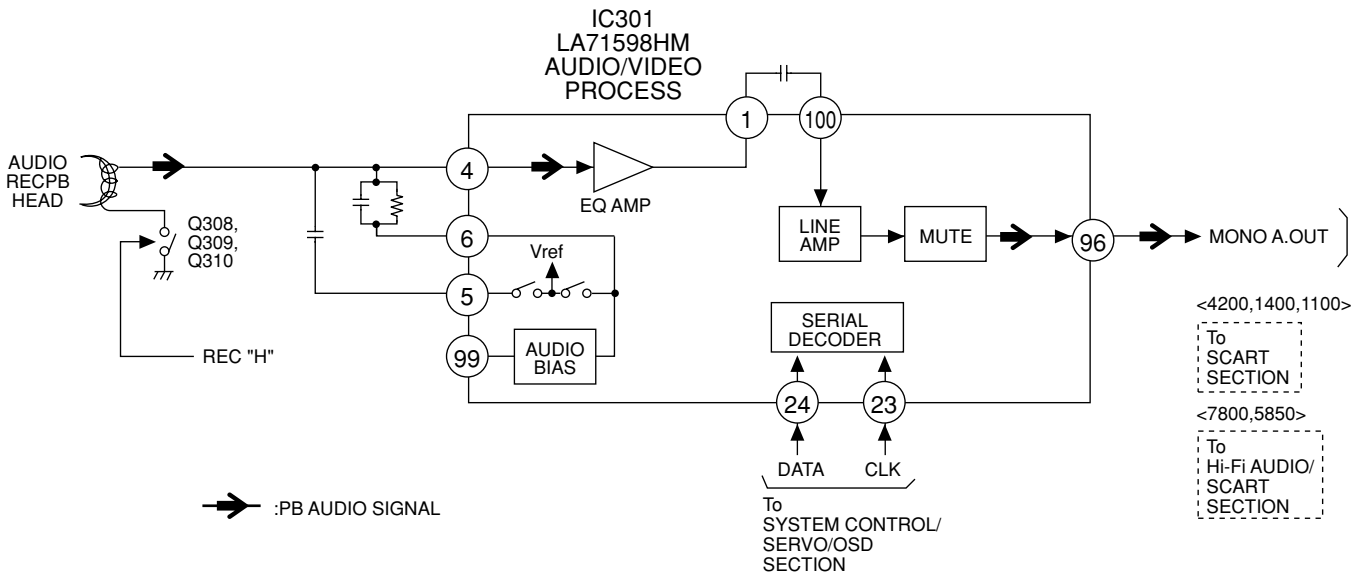


BLOCK DIAGRAM -4/8 (VIDEO SECTION)

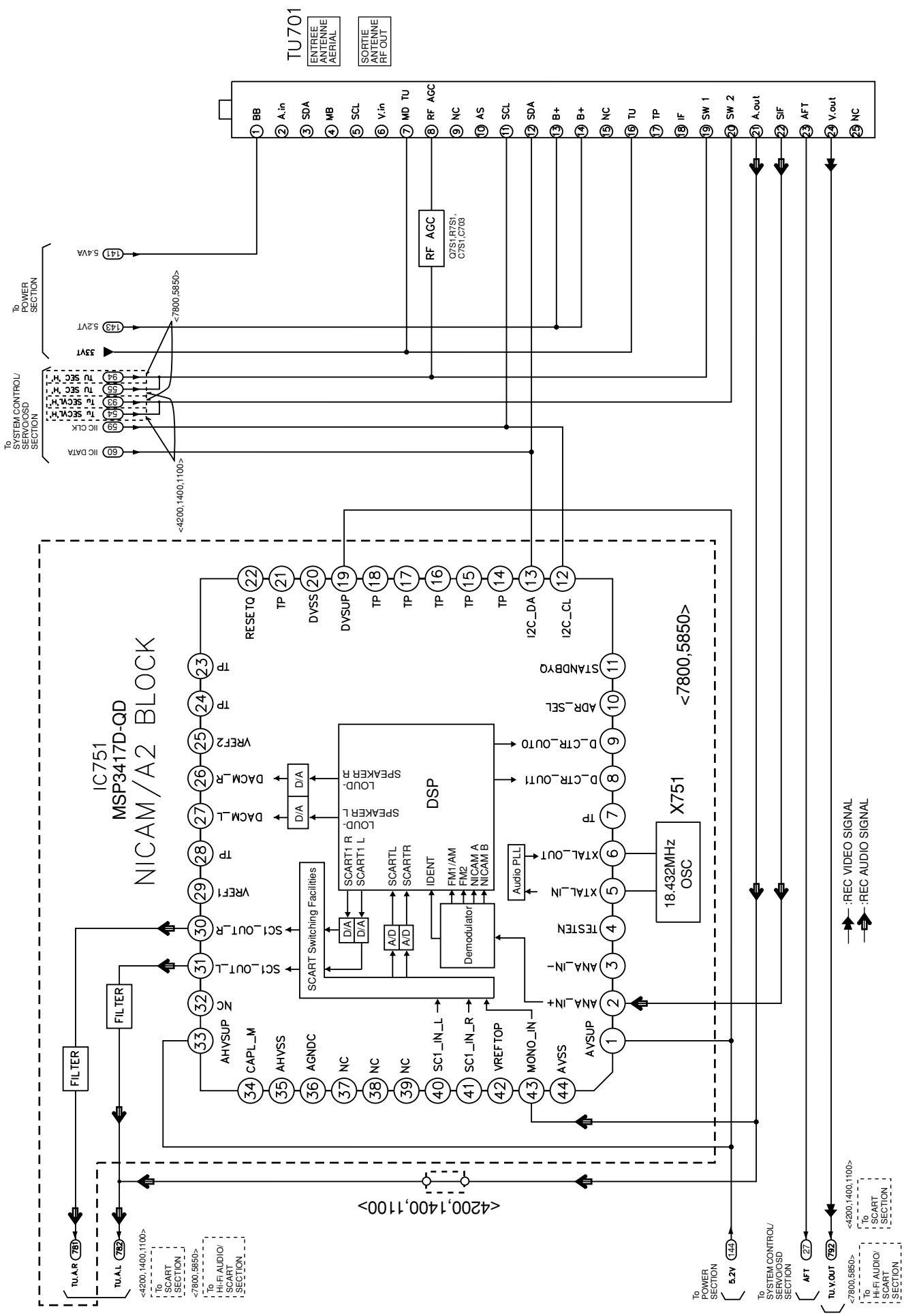


BLOCK DIAGRAM -5/8 (NORMAL AUDIO SECTION)

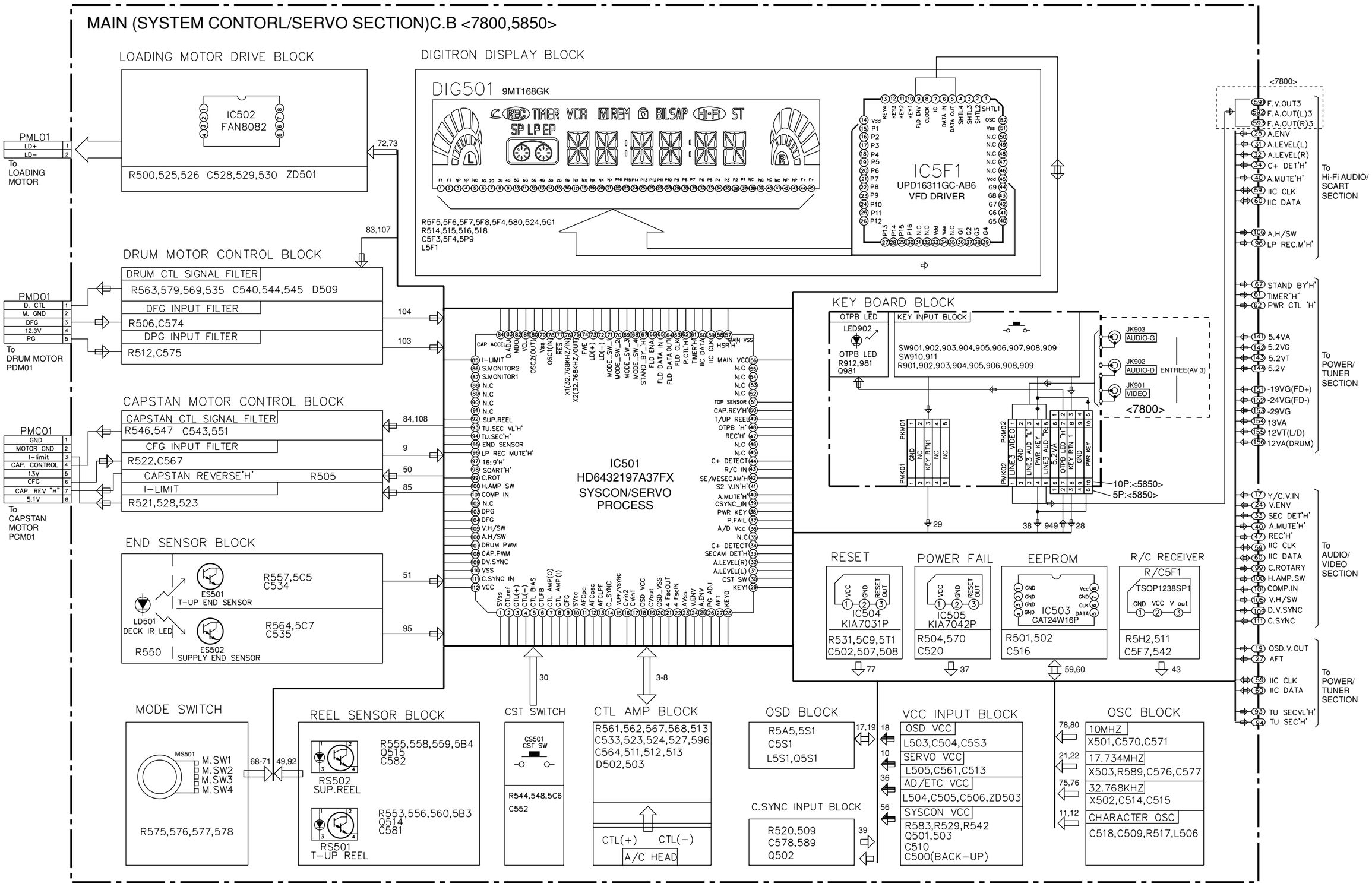




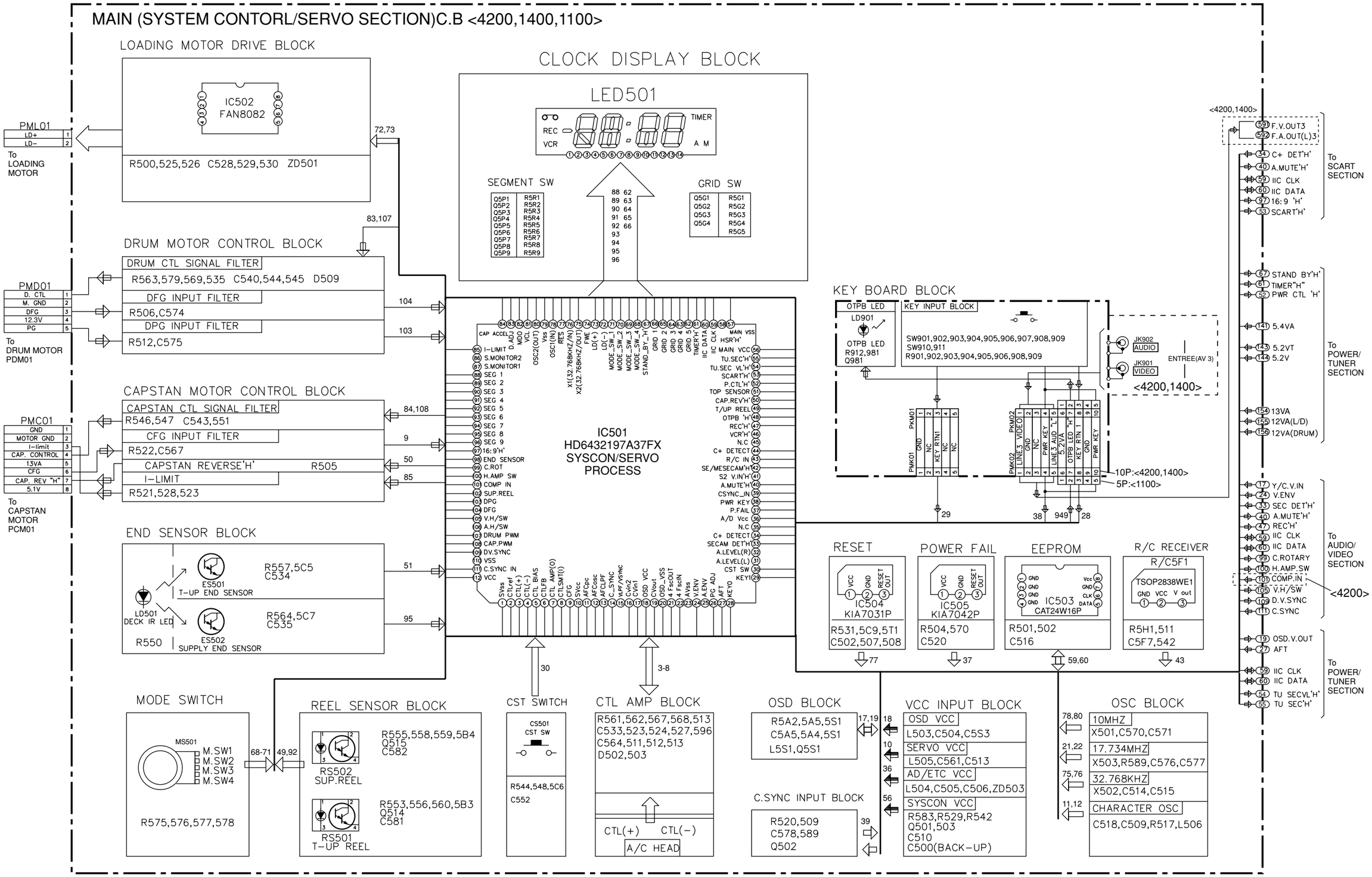
BLOCK DIAGRAM -6/8 (TUNER, NICAM/A2 SECTION)



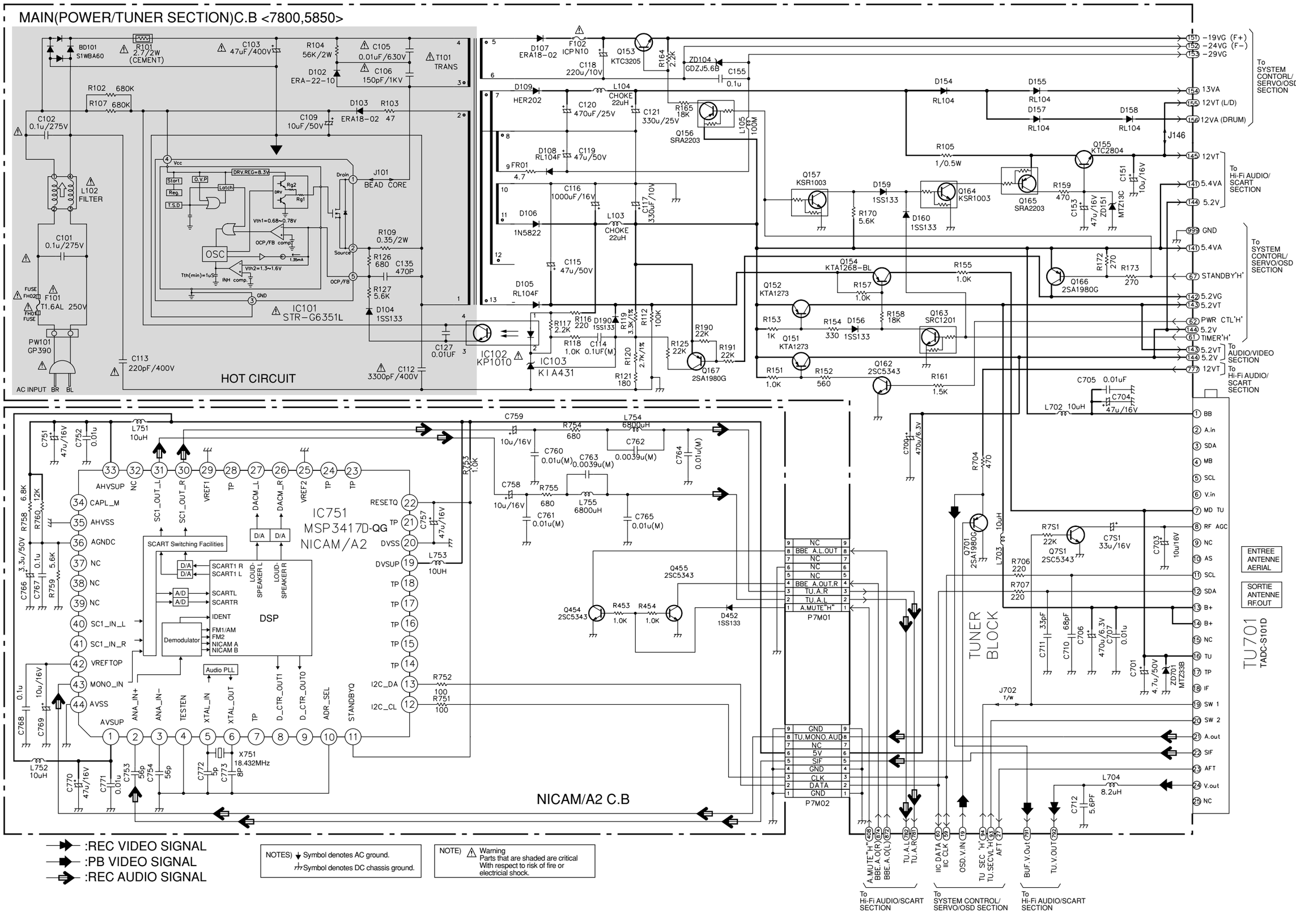
BLOCK DIAGRAM -7/8 (SYSTEM CONTROL/SERVO/OSD SECTION) <HV-FX7800/FX5850>



BLOCK DIAGRAM -8/8 (SYSTEM CONTROL/SERVO/OSD SECTION) <HV-FX4200/GX1400/GX1100>

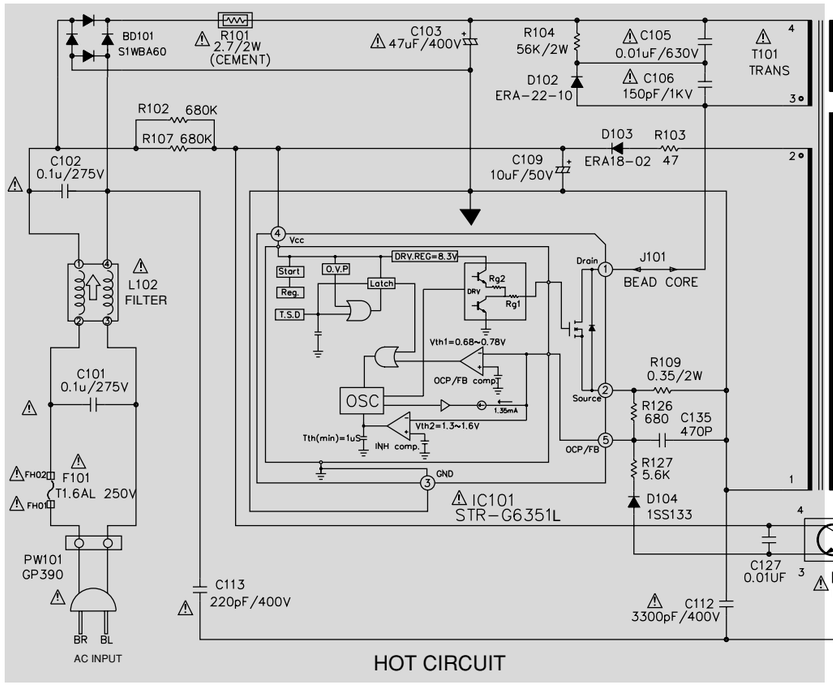


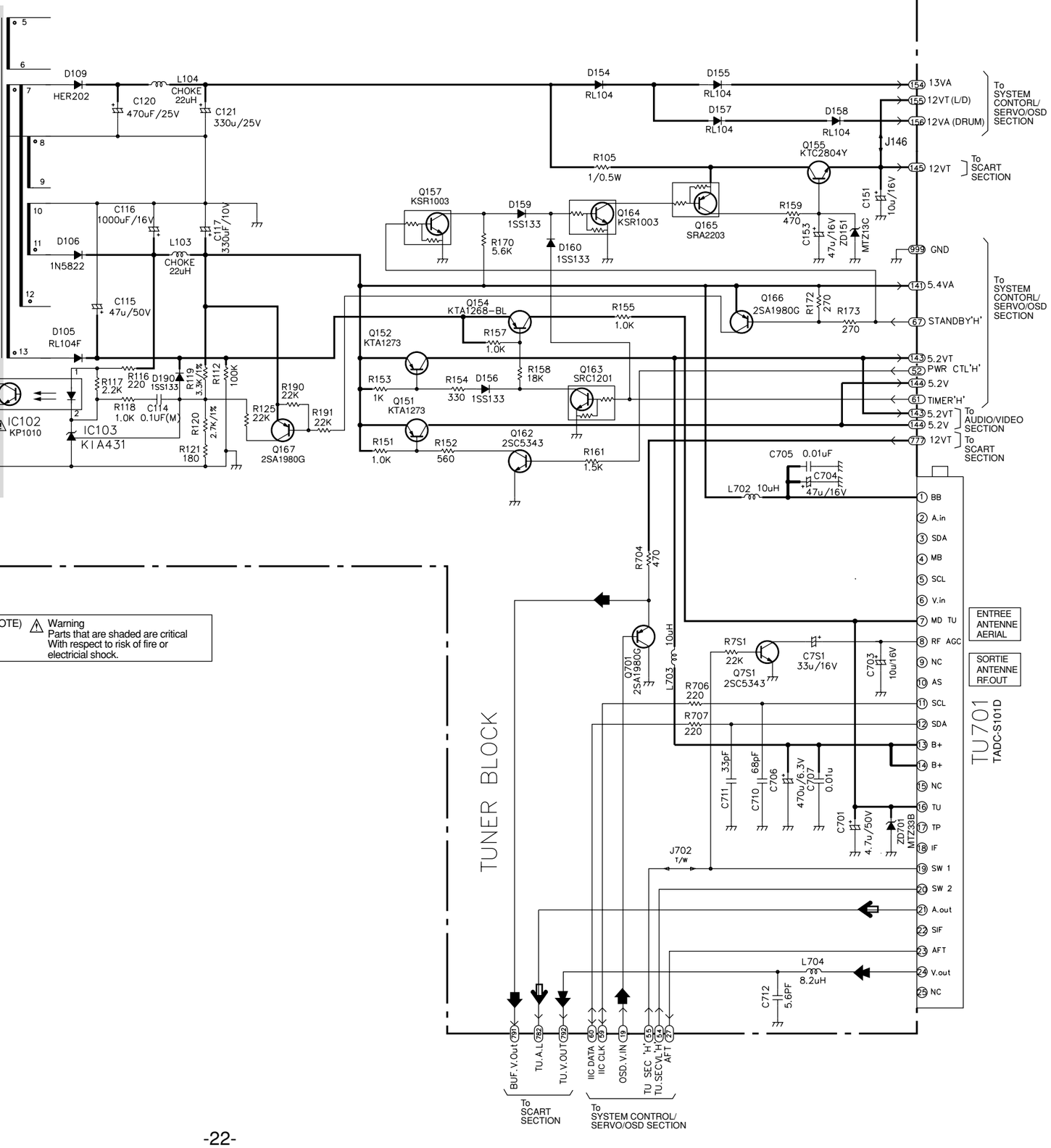
SCHEMATIC DIAGRAM - 1/11 (POWER/TUNER/NICAM SECTION) <HV-FX7800/FX5850>



SCHEMATIC DIAGRAM - 2/11 (POWER/TUNER SECTION) <HV-FX4200/GX1400/GX1100>

MAIN(POWER/TUNER SECTION)C.B <4200,1400,1100>





:REC VIDEO SIGNAL
:PB VIDEO SIGNAL
:REC AUDIO SIGNAL

NOTES) ⏚ Symbol denotes AC ground.
⏚ Symbol denotes DC chassis ground.

NOTE) ⚠ Warning
Parts that are shaded are critical
With respect to risk of fire or
electricial shock.

VOLTAGE CHART - 1/4 (POWER/NICAM SECTION)

IC101

	PB	REC
1	AC 440Vp-p	AC 450Vp-p
2	0.014	0.015
3	0	0
4	18.4	18.7
5	0.2	0.2

IC102

PB	18.4	4.2
REC	18.8	4.1
4		
	IC102	
1		
PB	5.2	4.2
REC	5.2	4.2

IC103

	Gate		Anode		Cathode	
	PB	REC	PB	REC	PB	REC
IC103	2.5	2.5	0	0	4.1	4.2

TRANSISTOR

	Emitter		Collector		Base	
	PB	REC	PB	REC	PB	REC
Q151	5.3	5.3	5.2	5.2	4.6	4.6
Q152	5.3	5.3	5.2	5.2	4.5	4.5
Q153	-18.3	-18.8	-18.2	-18.7	-17.7	-18.1
Q154	31.5	32.1	31.4	32.1	30.9	31.4
Q155	12.1	12.1	14.2	14.4	12.7	12.7
Q156	5.3	5.3	5.3	5.3	0.8	0.8
Q157	0	0	5.1	5.1	0.9	0.9
Q162	0	0	0	0	0.7	0.7
Q163	0	0	0	0	5.2	5.2
Q164	0	0	0	0	4.7	4.7
Q165	14.2	14.4	14.1	14.3	0	0
Q166	5.3	5.3	5.3	5.3	4.5	4.5
Q167	5.3	5.3	0.0	0.0	5.2	5.0
Q701	3.1	3.3	0	0	2.4	2.6
Q7S1	0	0	0.4	0.4	0	0

IC751

PIN	EE	PIN	EE	PIN	EE	PIN	EE
1	5.06	12	4.86	23	0	34	4.17
2	1.48	13	4.8	24	0	35	0
3	1.48	14	0.5	25	0	36	2.88
4	0	15	0.15	26	0	37	0
5	2.34	16	0.16	27	0	38	0
6	2.18	17	0.19	28	2.88	39	0
7	0.13	18	0.16	29	0	40	2.87
8	0.14	19	5.0	30	2.88	41	2.87
9	0.14	20	0	31	2.89	42	2.52
10	0	21	0.12	32	0	43	2.46
11	5.07	22	5.0	33	5.08	44	0

NOTE:

Voltage are DC-measured with a digital voltmeter during TUNER mode.

VOLTAGE CHART - 2/4 (AUDIO/VIDEO SECTION)

IC301

PIN	PB	REC	PIN	PB	REC	PIN	PB	REC	PIN	PB	REC	PIN	PB	REC
1	2.44	2.42	21	2.41	2.52	41	2.93	2.92	61	3.43	3.43	81	0	0
2	2.44	2.42	22	0	0	42	3.16	3.14	62	3.31	3.32	82	0.03	0.04
3	2.46	2.44	23	4.48	4.52	43	3.02	2.05	63	5	5	83	0	0
4	2.45	2.35	24	4.19	4.23	44	0	0	64	5	5	84	0.03	0.03
5	0.09	0.88	25	1.69	1.69	45	2.34	2.33	65	2.03	2.03	85	0.03	0.03
6	2.46	2.34	26	0.05	0.06	46	1.46	1.44	66	2.66	2.67	86	0	0
7	2.46	2.34	27	0.34	0.34	47	9.13	9.12	67	3.87	3.86	87	4.87	4.80
8	0	0	28	0.34	0.34	48	1.94	1.96	68	0	0	88	1.83	3.97
9	0	0	29	1.78	1.84	49	0.85	0.85	69	0.80	1.27	89	0	0
10	0.93	0.93	30	1.10	4.57	50	0	0	70	1.98	2.92	90	1.83	3.95
11	1.68	1.68	31	2.97	2.94	51	1.83	1.82	71	2.52	2.51	91	1.83	3.98
12	4.98	2.60	32	-	2.3	52	2.71	2.62	72	3.37	1.73	92	0.02	1.55
13	1.49	1.52	33	1.45	1.37	53	0	0	73	3.8	3.17	93	2.17	0.01
14	1.68	1.38	34	1.81	1.79	54	2.62	2.62	74	1.55	0.01	94	0	2.01
15	2.34	2.32	35	3.25	3.22	55	4.91	4.91	75	4.96	4.94	95	0	0
16	5.01	5.02	36	1.82	1.95	56	0.56	0.57	76	2.43	2.41	96	2.29	2.38
17	3.08	0.15	37	4.79	4.79	57	3.44	3.44	77	0.01	0.14	97	0	0
18	1.98	2.45	38	1.81	2.25	58	5.00	5.00	78	2.42	2.42	98	2.43	2.41
19	1.18	2.45	39	4.10	4.10	59	3.36	3.37	79	2.46	2.45	99	5.08	4.28
20	3.01	3.05	40	5.00	5.00	60	3.31	3.31	80	2.43	2.23	100	2.43	2.60

IC201

PIN	E	C	B
1	2.239	2.238	2.216
2	4.794	4.823	4.731
3	3.098	3.098	3.066
4	4.264	4.260	4.218
5	5.196	5.192	5.137
6	4.315	4.163	4.231
7	4.652	4.554	4.467
8	0	0	0
9	0.360	0.358	0.369
10	0.048	0.050	0.059
11	3.262	3.261	3.236
12	1.794	1.813	1.803
13	3.574	3.565	3.567
14	4.442	4.438	4.396
15	1.940	1.923	0.093
16	3.199	3.2	3.176
17	5.150	5.138	5.120
18	2.798	2.857	2.701
19	2.215	2.938	2.203
20	0	0	0
21	2.615	2.813	2.803
22	2.780	2.802	2.701
23	3.387	3.324	3.356
24	2.549	2.554	2.538

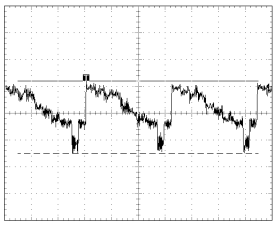
IC7V1

PIN	PB/ REC
1	0
2	2.7
3	5.1
4	5.1
5	0
6	4.8
7	4.9
8	5.1
9	4.8
10	0
11	2.2
12	2.2
13	1.0
14	0
15	5.1
16	3.1
17	2.6
18	4.7
19	5.1
20	5.1
21	0
22	4.5
23	5.1
24	5.1

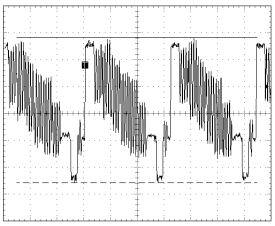
TRANSISTOR

	PB mode			REC mode		
	E	C	B	E	C	B
Q301	1.213	3.930	1.864	1.783	3.348	2.435
Q302	1.548	5.158	2.191	1.813	5.147	2.452
Q303	2.151	0	1.499	2.147	0	1.494
Q304	1.217	5.061	1.835	1.216	5.039	1.824
Q305	2.383	0	1.705	2.420	0	1.749
Q307	5.258	0.280	5.176	5.186	3.301	4.352
Q308	0	0	0.744	15.624	0	-21.49
Q309	0	0	0.720	-5.69	0	-21.77
Q310	5.256	5.180	4.583	5.189	-21.64	5.148
Q311	1.224	3.923	1.872	0.271	3.190	0.636
Q3A1	0	5.251	0	1.258	5.179	1.766
Q201	1.313	5.135	1.924	0.625	5.115	0.092
Q202	1.314	5.135	1.237	0.624	5.120	1.219
Q203	0	1.924	0.016	0	0.092	5.111
Q3S1	1.63	1.43	0.21	1.6	1.4	4.6

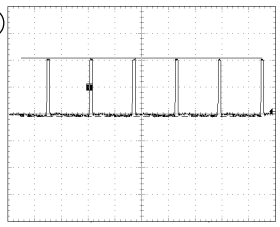
WAVEFORMS-1/2 (AUDIO/VIDEO SECTION)

① 

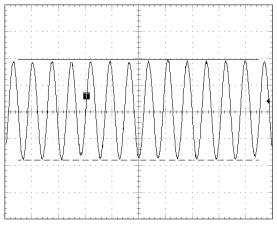
IC301 Pin ⑳
500mVp-p
PB mode

② 

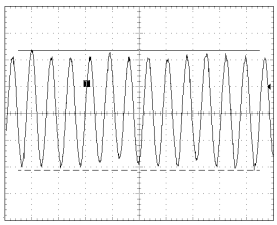
IC301 Pin ㉛, ㉜, ㊳
1Vp-p
Video in

③ 

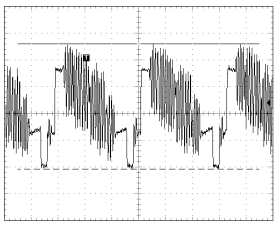
IC301 Pin ㉘
4.2Vp-p
PB/REC modes

④ 

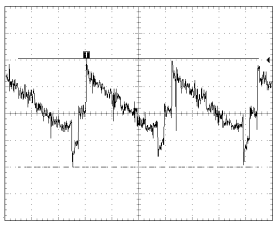
IC301Pin ⑦
1.4Vp-p
REC mode

⑤ 

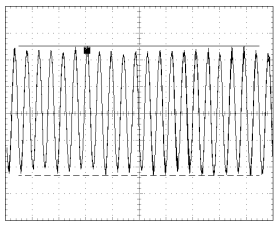
IC301 Pin ⑥
2.2Vp-p
REC mode

⑥ 

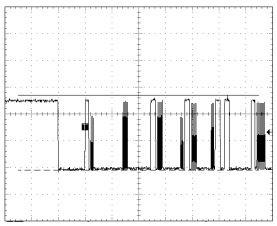
IC301 Pin ㉙
2.1Vp-p
PB mode

⑦ 

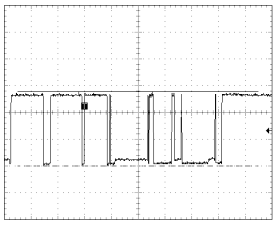
IC301 Pin ㊶
400mVp-p
PB mode

⑧ 

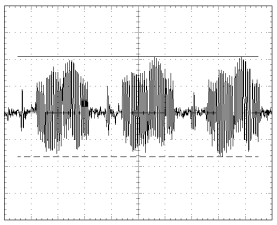
IC301 Pin ㊼
600mVp-p
PB mode

⑨ 

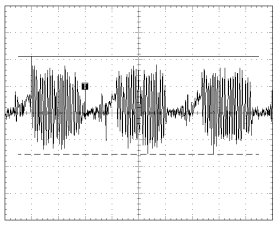
IC301 Pin ㉓
5Vp-p
PB/REC modes

⑩ 

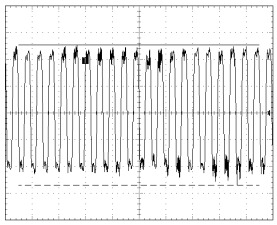
IC301 Pin ㉔
5Vp-p
PB/REC modes

⑪ 

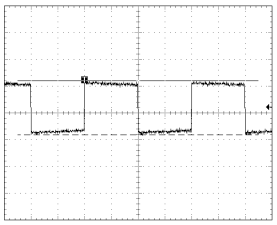
IC301 Pin ㉑, ㉒
340mVp-p
REC mode

⑫ 

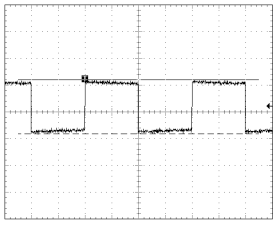
IC301 Pin ㉛, ㉜, ㉞
300mVp-p
PB mode

⑬ 

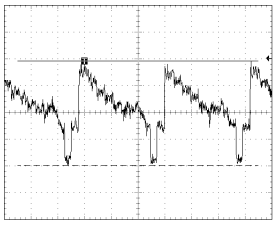
IC301 Pin ㊻
600mVp-p
PB mode

⑭ 

IC301 Pin ⑪
3.2Vp-p
PB mode

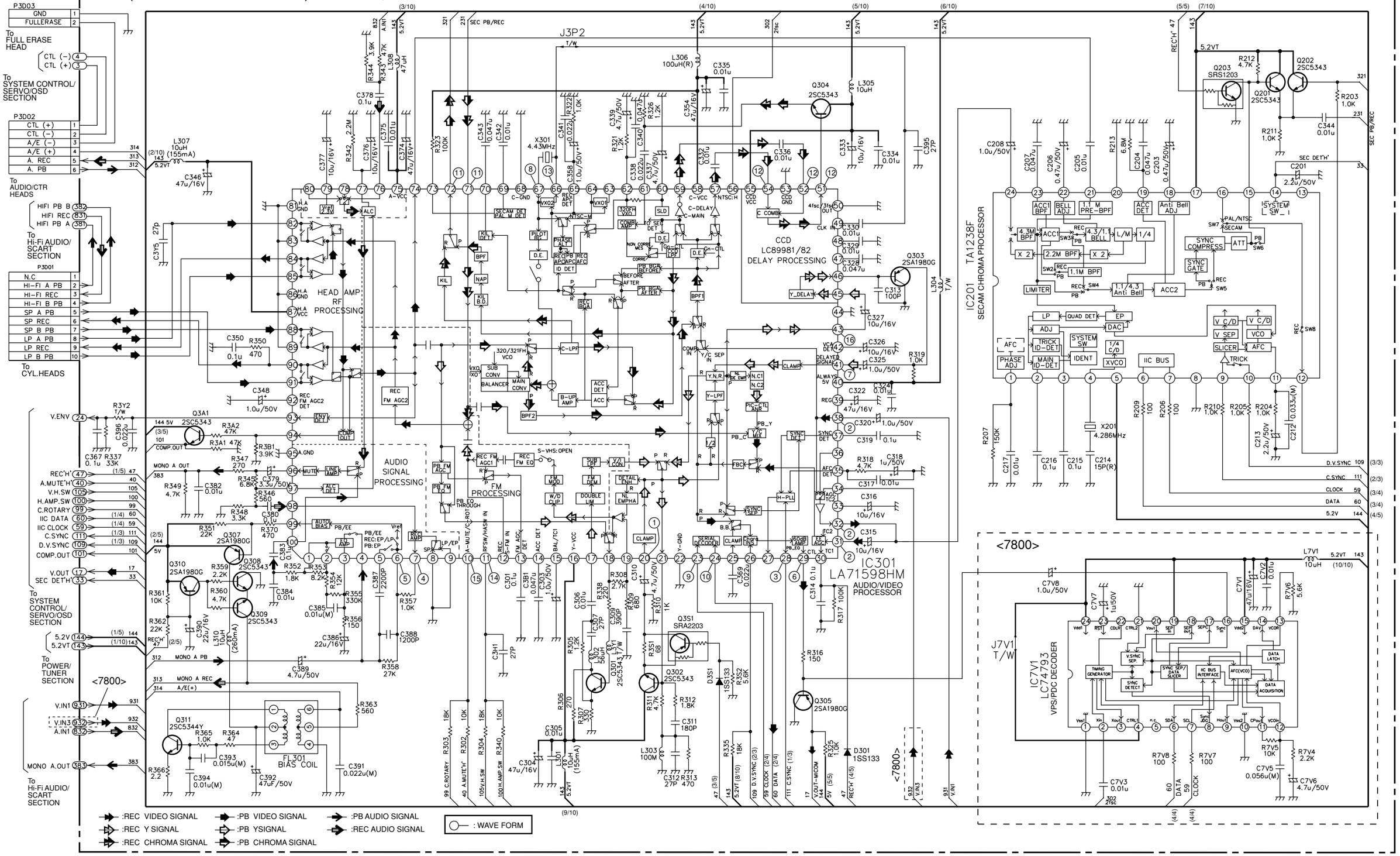
⑮ 

IC301 Pin ⑩
1.8Vp-p
PB mode

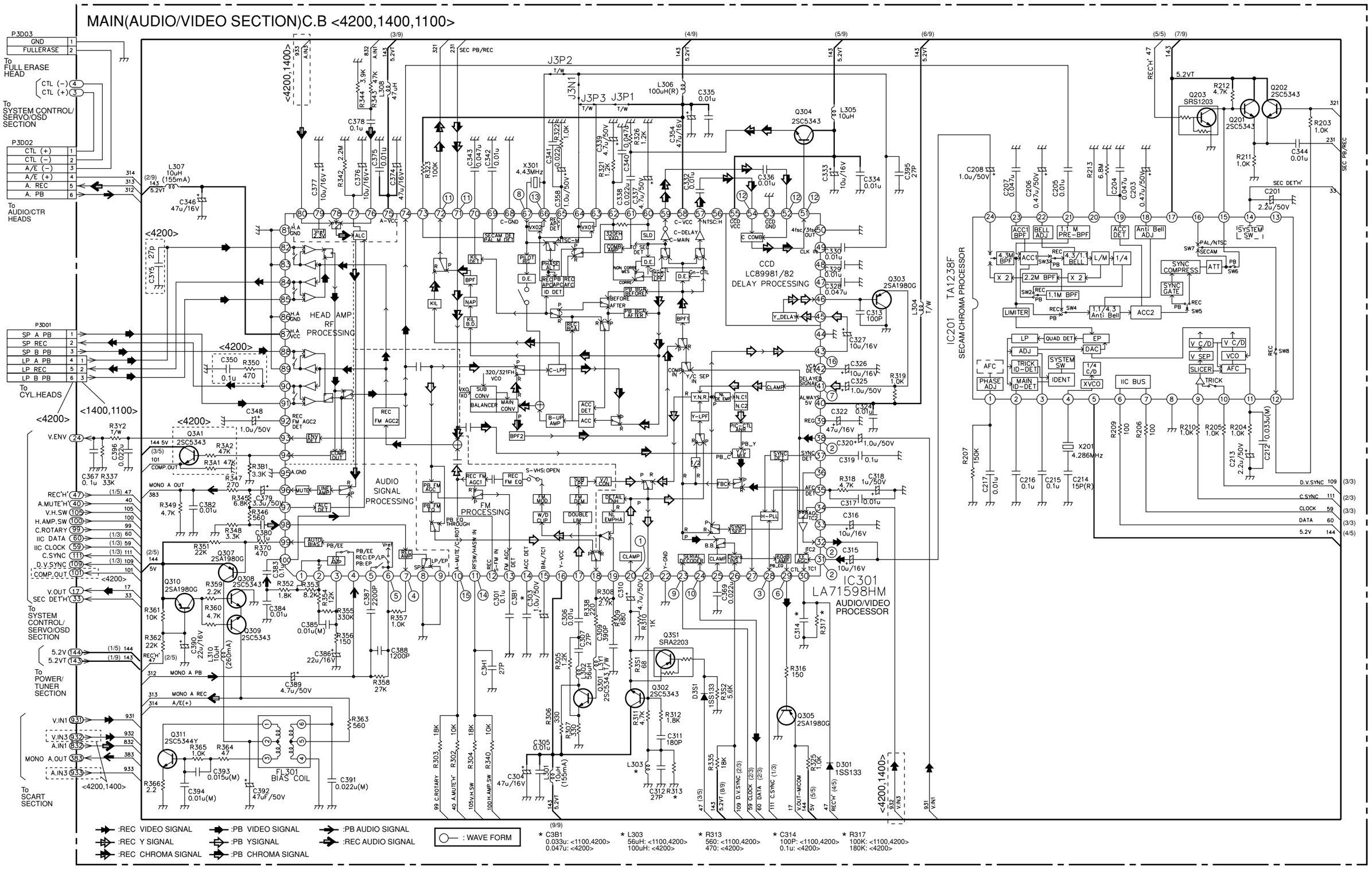
⑯ 

IC301 Pin ㊸
400mVp-p
PB mode

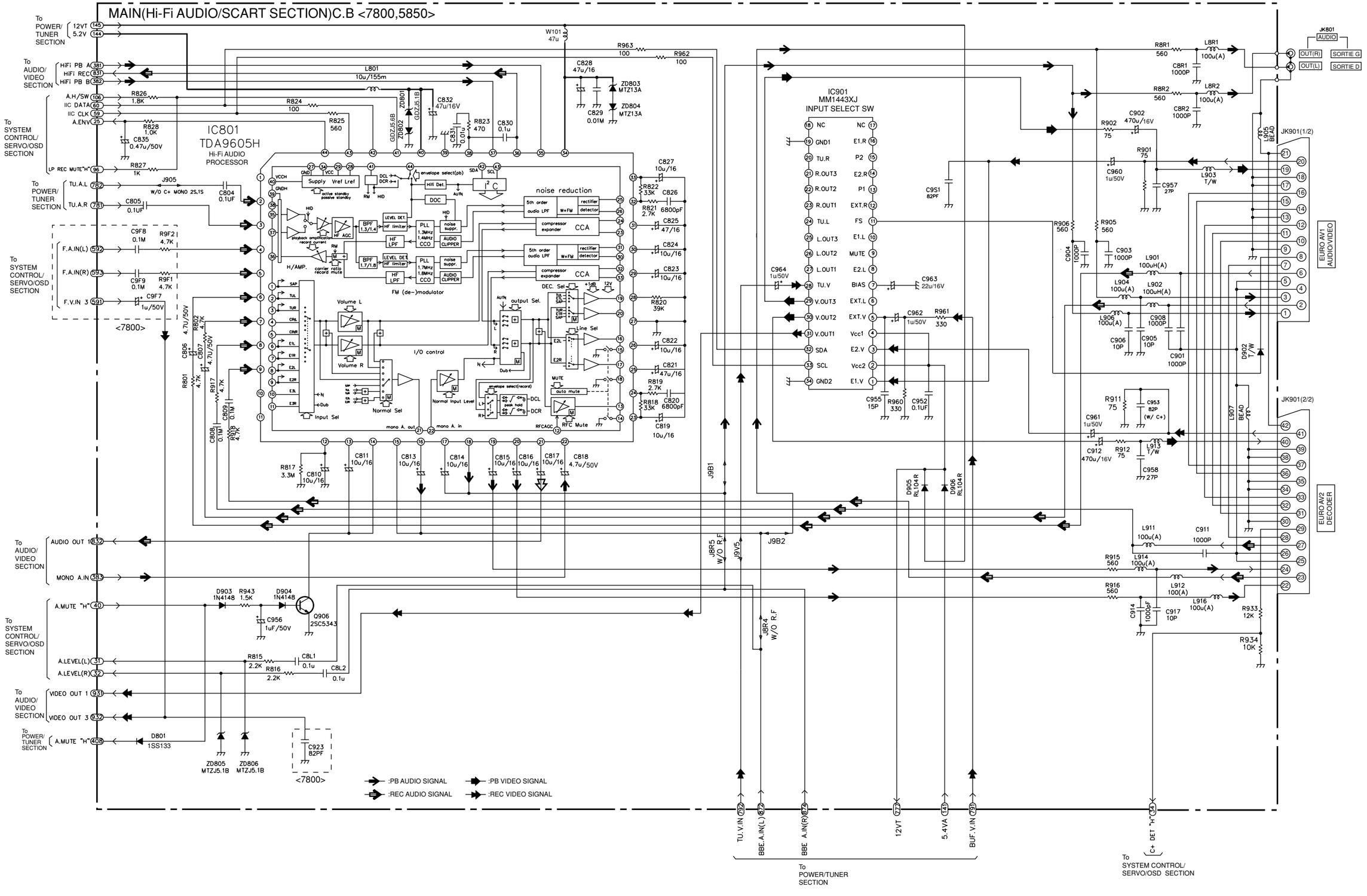
MAIN(AUDIO/VIDEO SECTION)C.B <7800,5850>



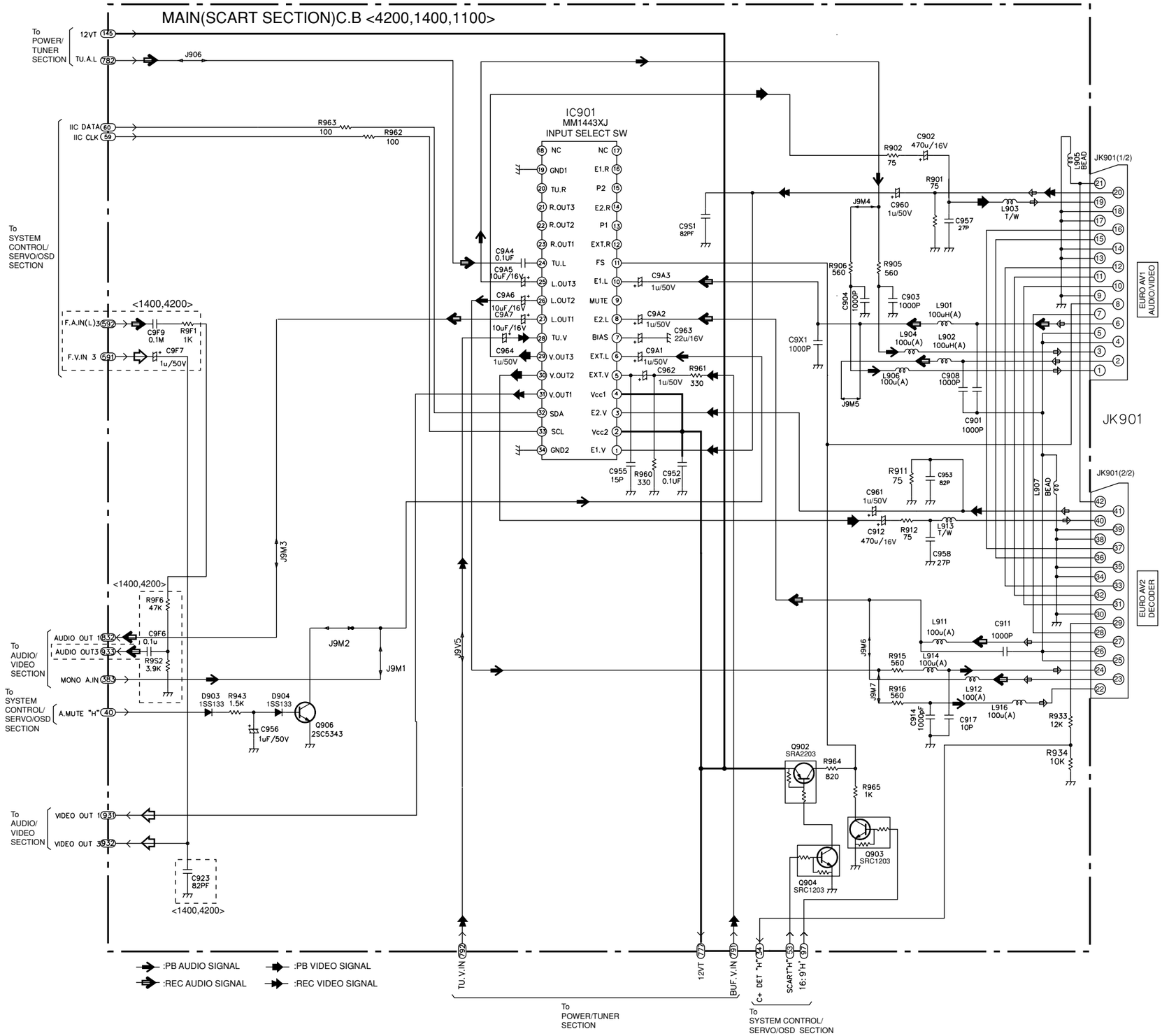
SCHEMATIC DIAGRAM - 4/11 (AUDIO/VIDEO SECTION) <HV-FX4200/GX1400/GX1100>



SCHEMATIC DIAGRAM - 5/11 (SCART SECTION) <HV-FX7800/FX5850>



SCHEMATIC DIAGRAM - 6/11 (SCART SECTION) <HV-FX4200/GX1400/GX1100>



VOLTAGE CHART -3/4 (Hi-Fi AUDIO/SCART SECTION)

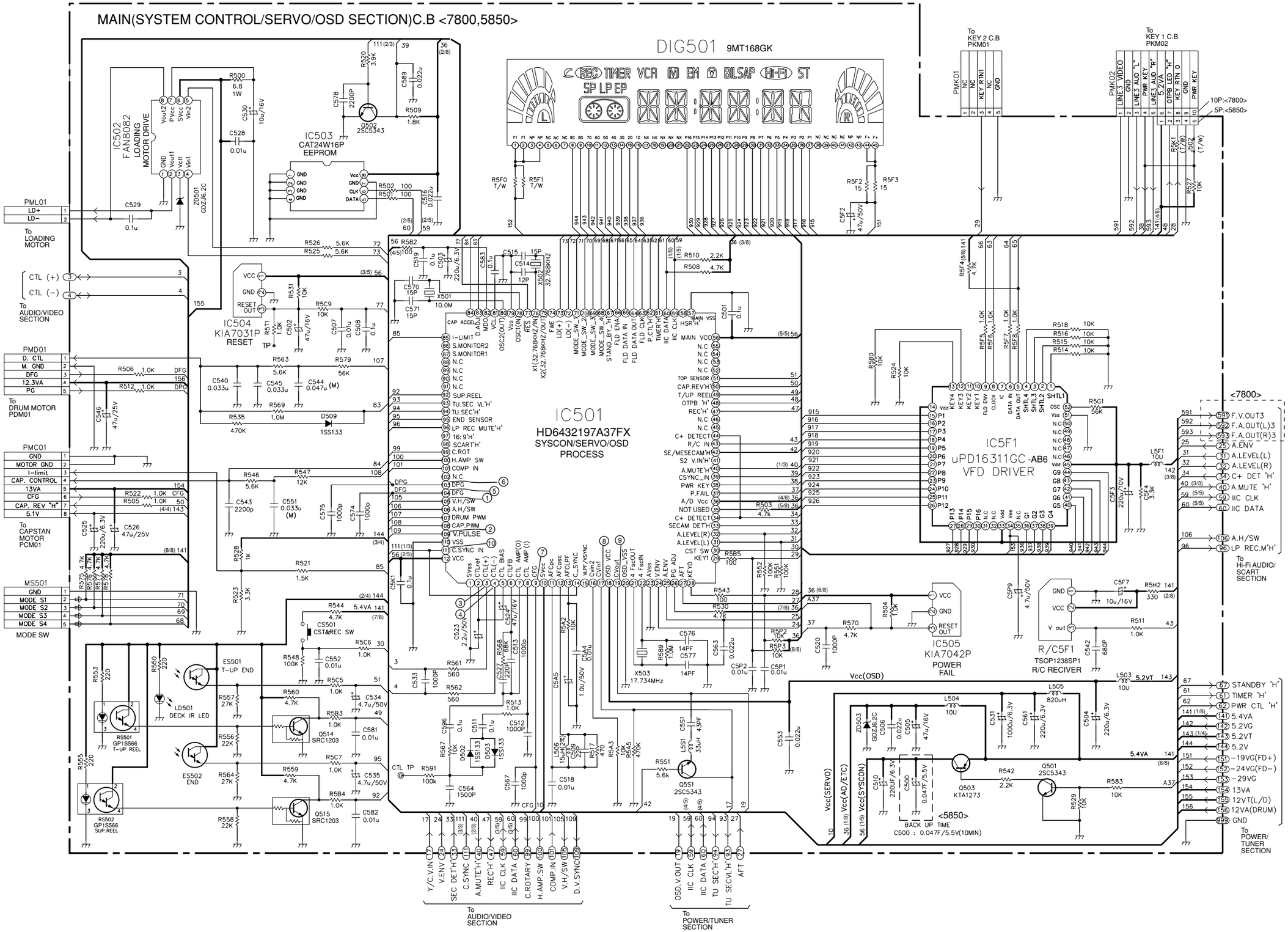
IC801

PB	3.6	4.4	4.2	0.9	5.1	0.0	0.0	0.7	0.6	0.7	11.9	3.9	3.9	3.9	0.8	3.9	3.9	0.0	0.8	3.9	3.9	3.9
REC	1.9	4.4	4.1	0.9	5.0	0.0	4.2	4.3	4.2	4.3	12.0	3.9	3.9	3.9	0.8	3.9	3.9	0.0	0.8	3.9	3.9	3.9
					40					35					30					25		
										IC801(TDA9605H)												
					5				1	0					15					20		
PB	3.8	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.8	3.8	3.8	0.0	3.9	0.0	0.0	6.0	6.0	0.0	6.0	6.0	4.5	3.8
REC	3.8	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.8	3.9	3.9	0.0	3.8	0.0	0.0	6.0	6.0	0.0	6.0	6.1	4.6	3.8

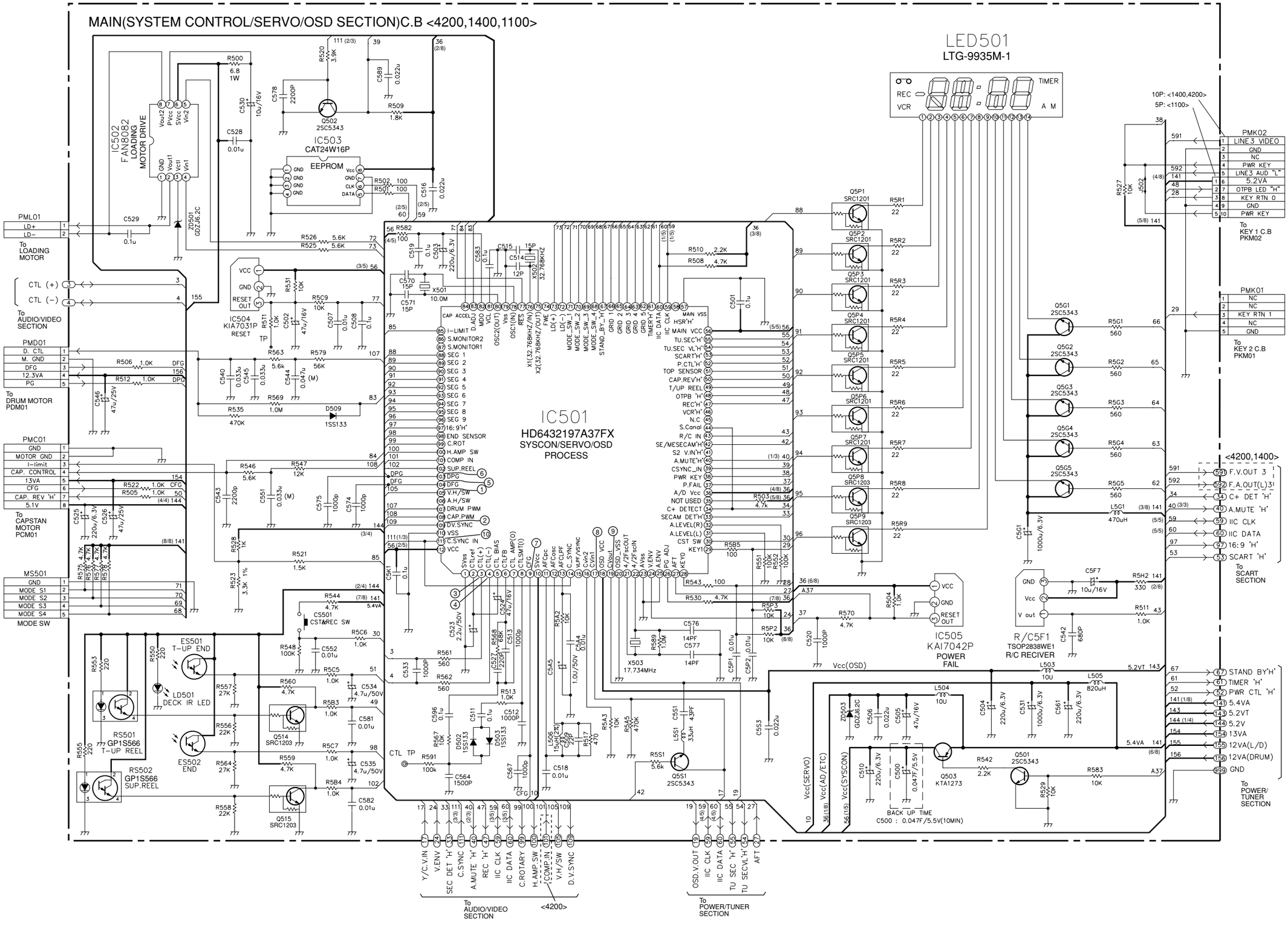
IC901

PB	0	4.8	4.7	3.8	1.5	1.5	3.3	5.5	5.5	5.5	5.5	5.5	5.5	5.5	0	0
REC	0	4.8	4.7	3.8	1.5	1.5	3.3	5.5	5.5	5.5	5.5	5.5	5.5	5.5	0	0
					30					25				20		
										IC901(MM1443)						
					5				1	0				15		
PB	2.7	11.6	2.7	11.6	3.5	5.5	5.5	5.5	0	5.5	11.7	5.5	0	5.5	0	5.5	0
REC	2.7	11.6	2.7	11.6	3.5	5.5	5.5	5.5	0	5.5	11.7	5.5	0	5.5	0	5.5	0

SCHEMATIC DIAGRAM - 7/11 (SYSTEM CONTROL/SERVO/OSC SECTION) <HV-FX7800/FX5850>



SCHEMATIC DIAGRAM - 8/11 (SYSTEM CONTROL/SERVO/OSC SECTION) <HV-FX4200/GX1400/GX1100>



VOLTAGE CHART -4/4 (SYSTEM CONTROL/SERVO/OSD SECTION)

IC501

PIN	PB	REC	PIN	PB	REC	PIN	PB	REC	PIN	PB	REC	PIN	PB	REC	PIN	PB	REC
1	0	0	21	2.45	2.47	41	0	0	61	5.15	PULSE	81	3.37	3.37	101	0	1.44
2	2.54	2.54	22	2.42	2.42	42	0	0	62	PULSE	PULSE	82	5.26	5.26	102	H/L	H/L
3	2.54	H/L	23	0	0	43	5.05	5.05	63	PULSE	PULSE	83	2.5	2.5	103	PULSE	PULSE
4	2.54	H/L	24	2.30	0	44	0	0	64	PULSE	PULSE	84	2.78	2.79	104	PULSE	PULSE
5	2.54	2.53	25	0	0	45	5.25	5.28	65	PULSE	PULSE	85	3.12	3.10	105	H/L	H/L
6	2.56	2.54	26	5.28	5.27	46	0	0	66	PULSE	PULSE	86	H/L	H/L	106	H/L	H/L
7	2.65	2.65	27	4.67	4.71	47	0	5.23	67	0.85	0.85	87	PULSE	PULSE	107	H/L	H/L
8	2.59	2.59	28	5.28	5.28	48	0	0	68	5.30	5.30	88	PULSE	PULSE	108	H/L	H/L
9	PULSE	PULSE	29	5.28	5.28	49	H/L	H/L	69	0	0	89	PULSE	PULSE	109	0	0
10	5.25	5.25	30	5.04	5.04	50	0	0	70	5.30	5.30	90	PULSE	PULSE	110	0	0
11	1.91	1.91	31	0	0	51	0	0	71	5.30	5.30	91	PULSE	PULSE	111	PULSE	PULSE
12	1.92	1.92	32	0	0	52	0	0	72	5.20	5.20	92	PULSE	PULSE	112	5.26	5.26
13	2.23	2.50	33	0.47	0.44	53	0	0	73	5.20	5.20	93	PULSE	PULSE			
14	PULSE	PULSE	34	0	0	54	3.18	3.20	74	0	0	94	PULSE	PULSE			
15	0.37	0.37	35	5.28	5.28	55	5.25	5.25	75	1.57	1.58	95	PULSE	PULSE			
16	2.01	2.01	36	5.28	5.28	56	5.25	0	76	1.40	1.40	96	PULSE	PULSE			
17	2.41	2.37	37	4.86	4.86	57	0	0	77	5.25	5.25	97	0	0			
18	5.14	5.12	38	5.28	5.28	58	0	PULSE	78	2.56	2.56	98	0	0			
19	2.48	2.42	39	2.17	2.18	59	PULSE	PULSE	79	0	0	99	H/L	H/L			
20	0	0	40	0	0	60	PULSE	5.15	80	2.56	2.56	100	0(SP)	5.25(LP)			

IC502

PB	0.4	12.9	12.9	2.2
REC	0.4	12.9	13.9	2.2

8 5

IC502

1 4

PB	0	0.4	0.4	2.2
REC	0	0.4	0.5	2.2

IC503

PB	5.29	0	Pulse	Pulse
REC	5.29	0	Pulse	Pulse

5

IC503

1

PB	0	0	0	0
REC	0	0	0	0

IC504

PIN	PB/REC
1	5.3
2	0
3	5.2

IC505

PIN	PB/REC
1	5.3
2	0
3	5.2

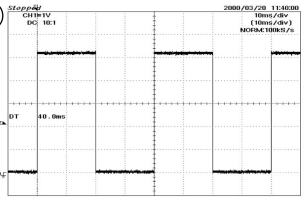
TRANSISTOR

	Emitter		Collector		Base	
	PB	REC	PB	REC	PB	REC
Q501	0	0	0	0	0.66	0.66
Q502	0	0	2.17	2.18	0.26	0.28
Q503	5.29	5.29	5.27	5.26	4.8	4.59
Q5S1	0.46	0.44	2.43	2.36	0	0
Q514	0	0	H/L	H/L	H/L	H/L
Q515	0	0	H/L	H/L	H/L	H/L
Q5G1	1.7	1.6	4.8	4.8	0.9	0.9
Q5G2	1.9	1.87	4.8	4.8	1.02	1.0
Q5G3	1.9	1.9	4.8	4.8	1.03	1.0
Q5G4	1.9	1.9	4.8	4.8	0.96	1.0
Q5G5	1.9	1.9	4.8	4.8	1.02	0.9
Q5P1	0	0	2.3	2.3	1.04	1.0
Q5P2	0	0	2.8	2.3	0	1.0
Q5P3	0	0	0.5	2.3	1.04	1.0
Q5P4	0	0	2.7	2.6	0	0
Q5P5	0	0	2.7	2.6	0	0
Q5P6	0	0	2.7	2.6	0	0
Q5P7	0	0	0.4	0.4	4.1	4.1
Q5P8	0	0	2.8	2.7	0	0
Q5P9	0	0	2.2	2.2	1.05	0

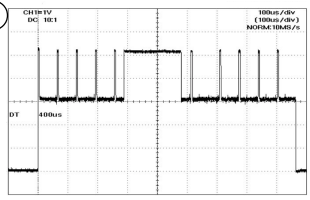
IC5F1

PIN	PB/REC	PIN	PB/REC	PIN	PB/REC	PIN	PB/REC
1	0	14	5.27	27	-30.2	40	-26.9
2	0	15	0	28	-29.3	41	-27.1
3	0	16	-23.6	29	29.3	42	-27.1
4	0	17	-14.2	30	0	43	-27.1
5	5.3	18	-23.6	31	0	44	5.3
6	5.05	19	-29.9	32	-13.7	45	5.3
7	5.27	20	-26.6	33	5.3	46	5.2
8	5.11	21	-9.7	34	-30.4	47	5.3
9	4.89	22	-6.9	35	-3.9	48	0.85
10	0.25	23	-16.5	36	-26.7	49	0
11	0.27	24	-16.5	37	-26.7	50	0
12	0.39	25	-7	38	-26.7	51	0
13	2.77	26	-30.2	39	-26.7	52	0

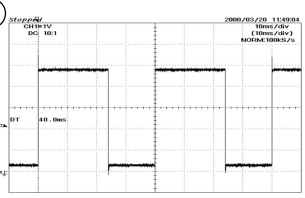
WAVEFORMS -2/2 (SYSTEM CONTROL/SERVO/OSD SECTION)

① 

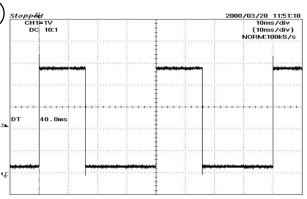
V.H/SW
(IC501 Pin ⑮)
1V/10mS
REC/PB modes

② 

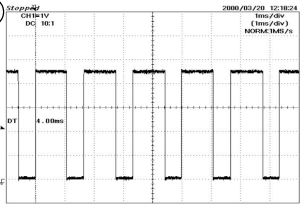
DV-SYNC
(IC501 Pin ⑲)
1V/100µS
QUE/REV modes

③ 

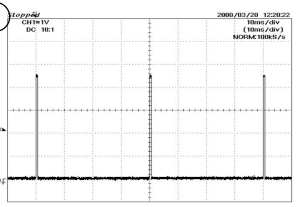
CTL+
(IC501 Pin ③)
1V/10mS

④ 

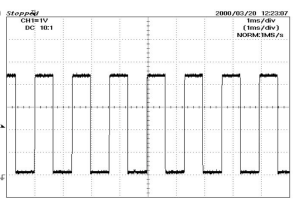
CTL–
(IC501 Pin ④)
1V/10mS

⑤ 

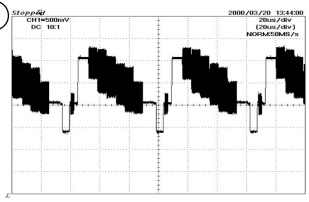
DFG
(IC501 Pin ⑭)
1V/1mS
REC/PB mode

⑥ 

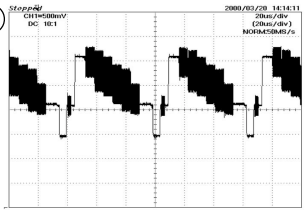
DPG
(IC501 Pin ⑬)
1V/10mS
REC/PB modes

⑦ 

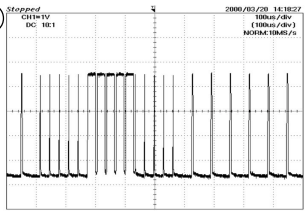
CFG
(IC501 Pin ⑨)
1V/10mS

⑧ 

V-IN
(IC501 Pin ⑰)
500mV/20µS

⑨ 

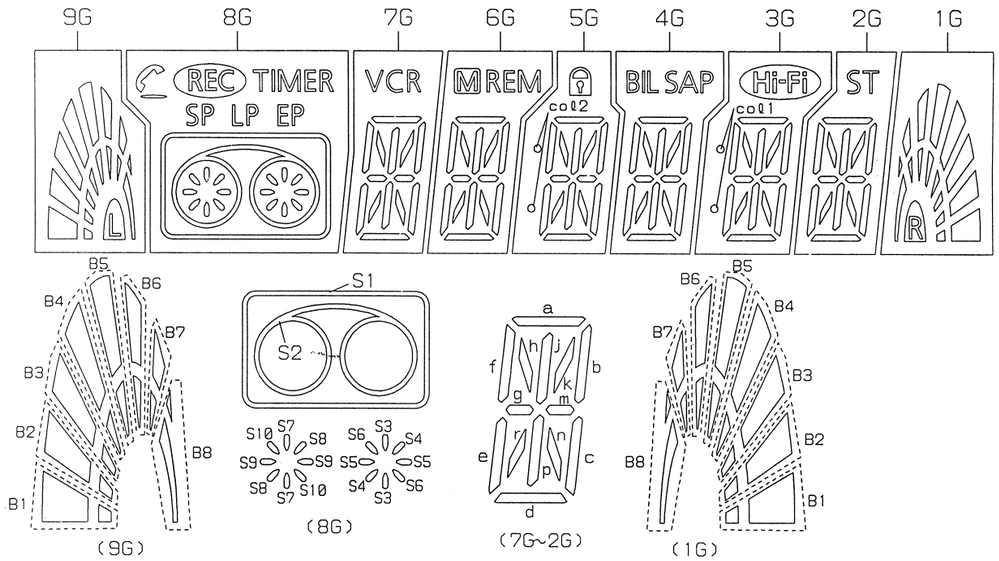
V-OUT
(IC501 Pin ⑲)
500mV/20µS
EE/PB modes

⑩ 

C-SYNC
(IC501Pin ⑪)
1V/100µS
EE/PB modes

FL DISPLAY -1/1 <HV-FX7800/FX5850>

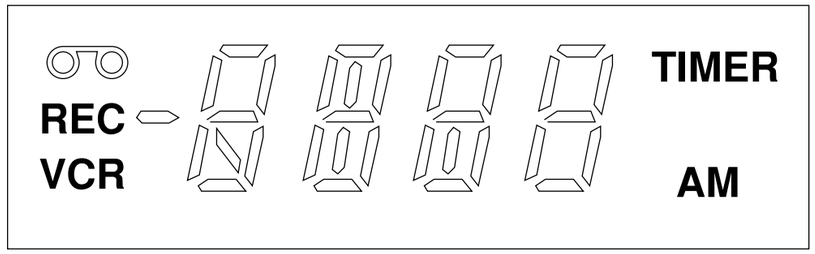
• GRID ASSIGNMENT

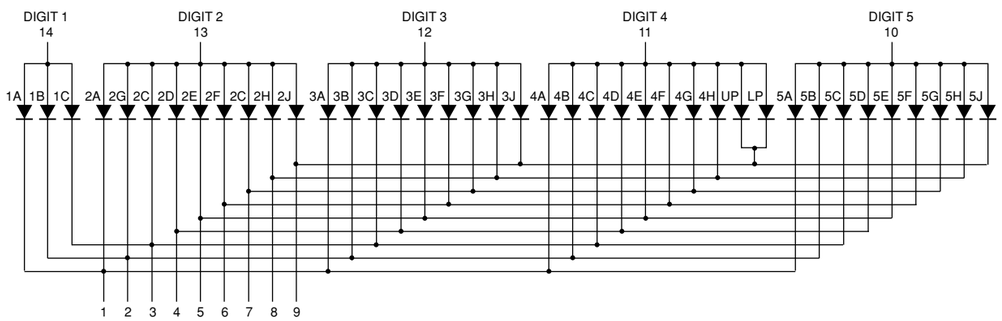


• ANODE CONNECTION

	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	–	TIMER	VCR	M	🔒	SAP	Hi-Fi	ST	–
P2	–	REC	–	REM	col2	BIL	col1	–	–
P3	B4	📞	a	a	a	a	a	a	B4
P4	B5	EP	h	h	h	h	h	h	B5
P5	B6	LP	j	j	j	j	j	j	B6
P6	B7	SP	k	k	k	k	k	k	B7
P7	B8	S1	b	b	b	b	b	b	B8
P8	B3	S2	f	f	f	f	f	f	B3
P9	B2	S3	m	m	m	m	m	m	B2
P10	B1	S4	g	g	g	g	g	g	B1
P11	L	S5	c	c	c	c	c	c	R
P12	–	S6	e	e	e	e	e	e	–
P13	–	S7	r	r	r	r	r	r	–
P14	–	S8	p	p	p	p	p	p	–
P15	–	S9	n	n	n	n	n	n	–
P16	–	S10	d	d	d	d	d	d	–

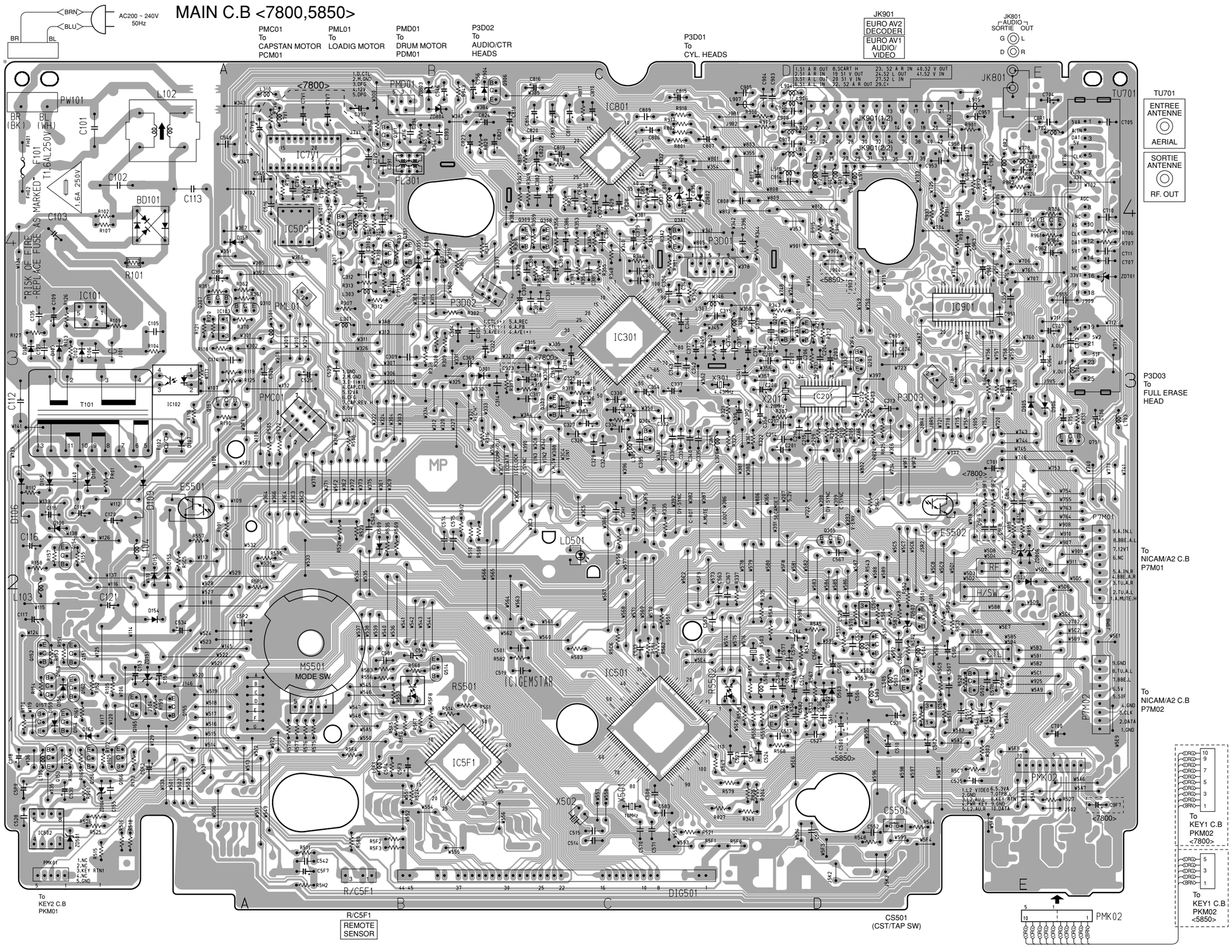
LED DISPLAY -1/1 <HV-FX4200/GX1400/GX1100>



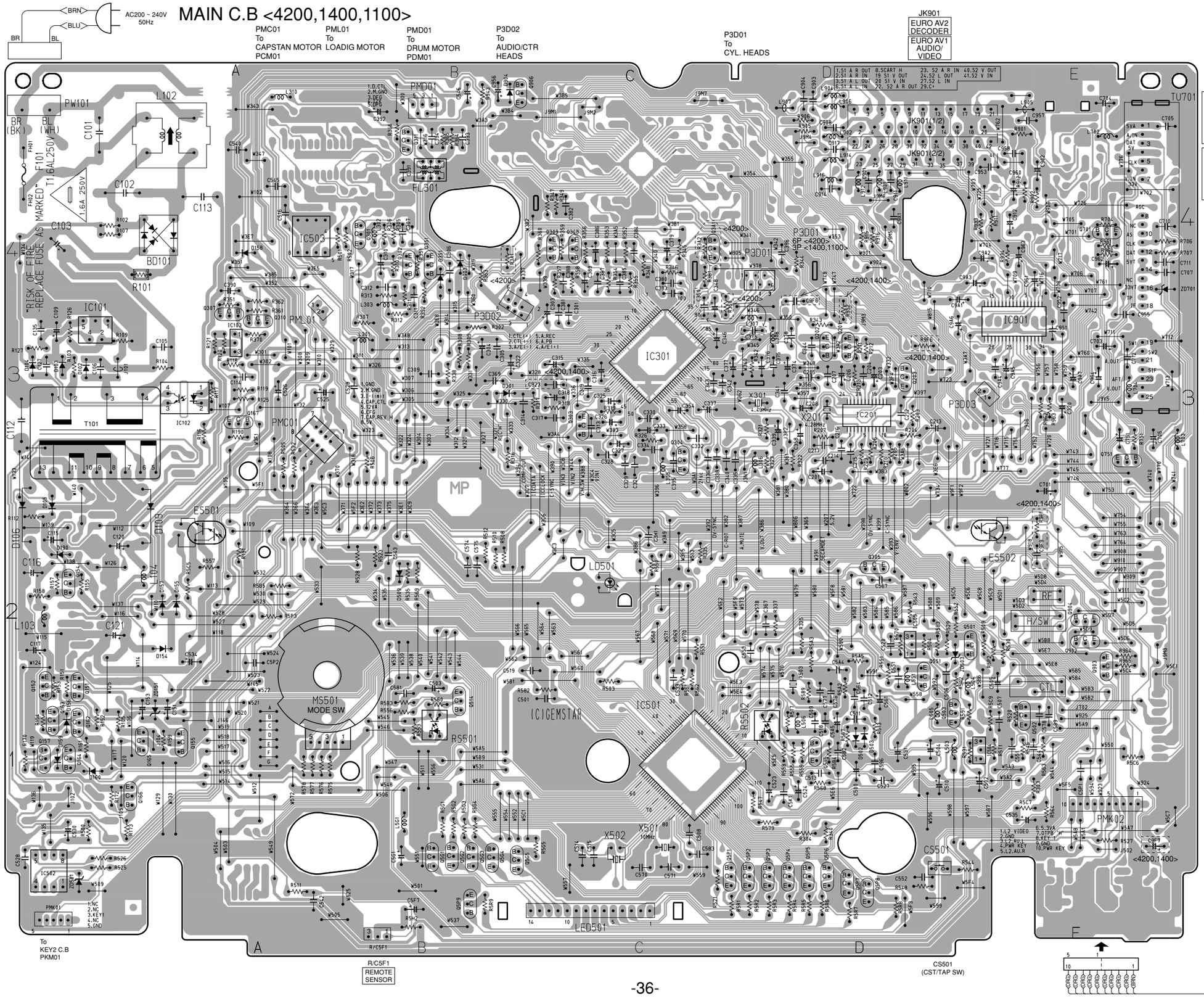


PIN CONNECTION

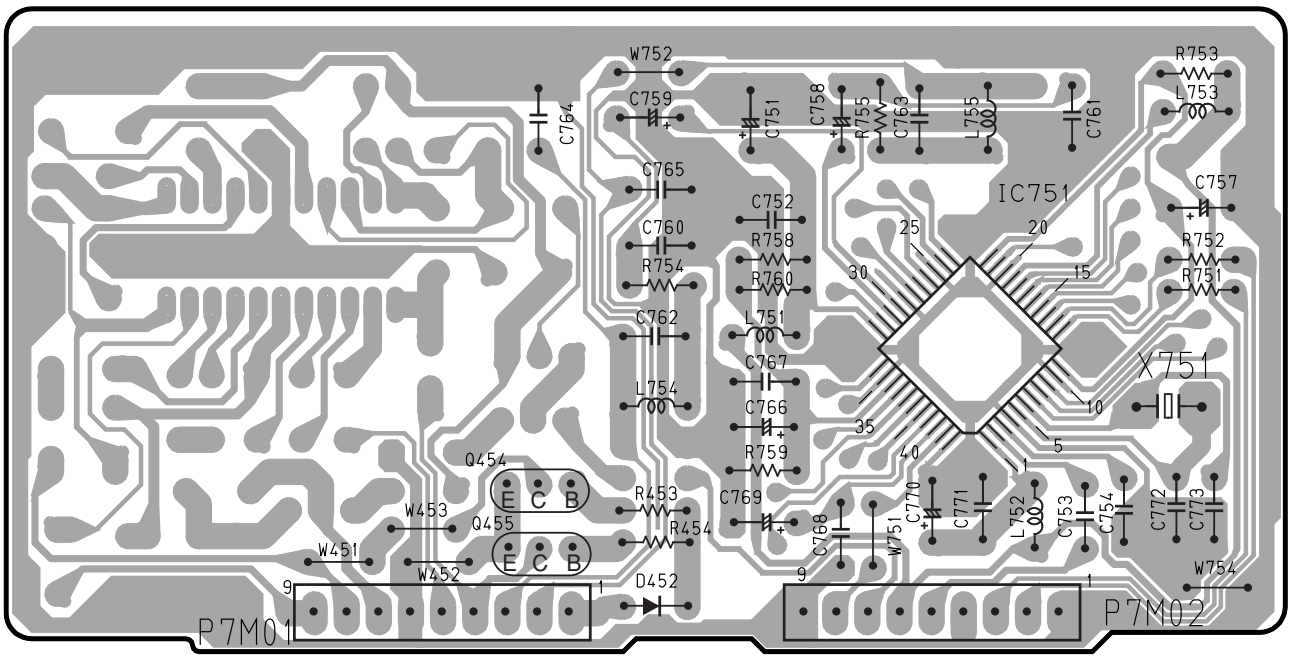
No.	CONNECTION
1	CATHODE 1A,2A,3A,4A,5A
2	CATHODE 1B,2B,3B,4B
3	CATHODE 1C,2C,3C,4C,5C
4	CATHODE 2D,3D,4D,5D
5	CATHODE 2E,3E,4E,5E
6	CATHODE 2F,3F,4F,5F
7	CATHODE 2G,3G,4G,5G
8	CATHODE 2H,3H,4H,5H
9	CATHODE 2J,3J,UP,LP,5J
10	COMMON ANODE (DIGIT 5)
11	COMMON ANODE (DIGIT 4)
12	COMMON ANODE (DIGIT 3)
13	COMMON ANODE (DIGIT 2)
14	COMMON ANODE (DIGIT 1)


MAIN C.B <7800,5850>
AC200 ~ 240V 50Hz
BRN
BLU
BR
BL
PMC01 To CAPSTAN MOTOR PCM01
PML01 To LOADIG MOTOR
PMD01 To DRUM MOTOR PDM01
P3D02 To AUDIO/CTR HEADS
P3D01 To CYL. HEADS
JK901 EURO AV2 DECODER
EURO AV1 AUDIO/ VIDEO
JK801 AUDIO SORTIE OUT
TU701 ENTREE ANTENNE AERIAL
SORTIE ANTENNE RF. OUT
P3D03 To FULL ERASE HEAD
To NICAM/A2 C.B P7M01
To NICAM/A2 C.B P7M02
To KEY1 C.B PKM02 <7800>
To KEY1 C.B PKM02 <5850>
To KEY2 C.B PKM01
R/C5F1 REMOTE SENSOR
CS501 (CST/TAP SW)
PW101
L102
C101
F101 T1.6AL250V
1.6A 250V
"RISK OF FIRE -REPLACE FUSE AS MARKED"
C102
C113
BD101
C103
R101
IC101
T101
IC102
C112
IC103
PMC01
ES501
D106
D103
C116
L104
L103
C121
C117
D154
MS501 MODE SW
IC503
IC7Y1
FL301
IC801
PMD01
PML01
P3D02
IC301
P3D01
IC901
IC201
P3D03
X301 4.433MHz
X201 4.286MHz
X502 10MHz
IC501 IC(GEMSTAR
IC5F1
RS501
RS502
LD501
ES502
RF
H/SW
CTL
P7M01
P7M02
PMK01
PMK02
DIG501
<7800>
<5850>

MAIN C.B <4200,1400,1100>

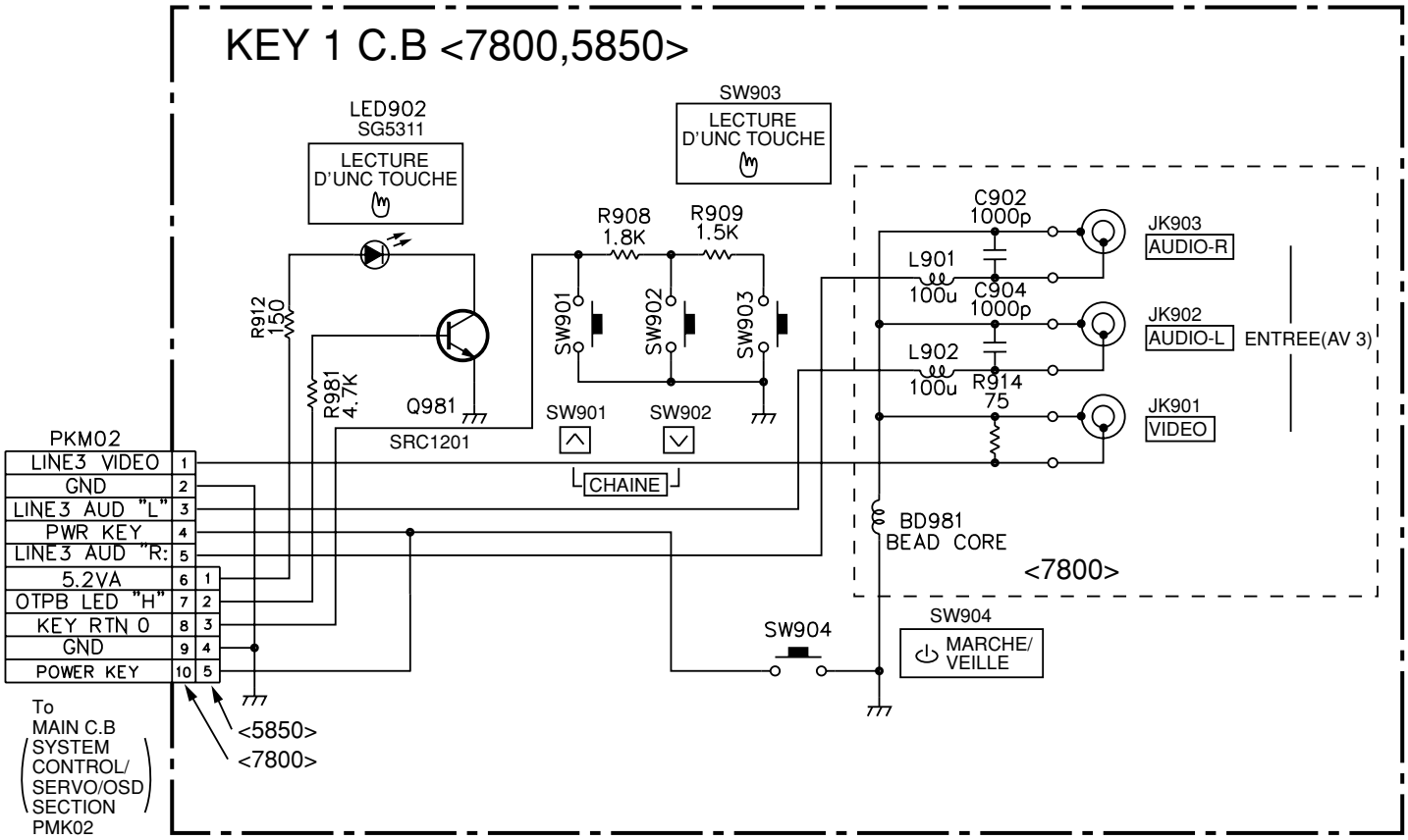


NICAM/A2 C.B



To
MAIN C.B
P7M01

To
MAIN C.B
P7M02


KEY 1 C.B <7800,5850>
LED902
SG5311
LECTURE
D'UNC TOUCHE
SW903
LECTURE
D'UNC TOUCHE
R908
1.8K
R909
1.5K
C902
1000p
JK903
AUDIO-R
L901
100u
C904
1000p
JK902
AUDIO-L
ENTREE(AV 3)
L902
100u
R914
75
JK901
VIDEO
R912
150
R981
4.7K
Q981
SRC1201
SW901
SW902
SW903
SW901
SW902
CHAINE
BD981
BEAD CORE
<7800>
SW904
MARCHE/
VEILLE
PKM02
LINE3 VIDEO 1
GND 2
LINE3 AUD "L" 3
PWR KEY 4
LINE3 AUD "R: 5
5.2VA 6 1
OTPB LED "H" 7 2
KEY RTN 0 8 3
GND 9 4
POWER KEY 10 5
To
MAIN C.B
SYSTEM
CONTROL/
SERVO/OSD
SECTION
PMK02
<5850>
<7800>

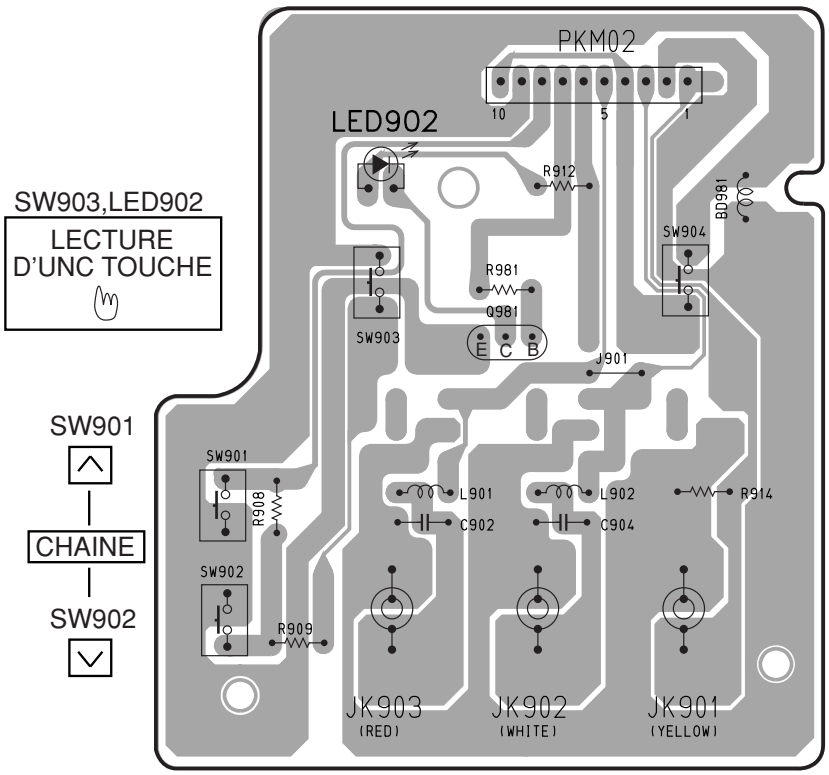
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

A B C D E F G H I J K L M N O P Q R S T U

<HV-FX7800>

KEY 1 C.B

To
MAIN C.B
PMK02



SW903,LED902
LECTURE
D'UNC TOUCHE

SW904
MARCHE/
VEILLE

SW901
CHAINE
SW902

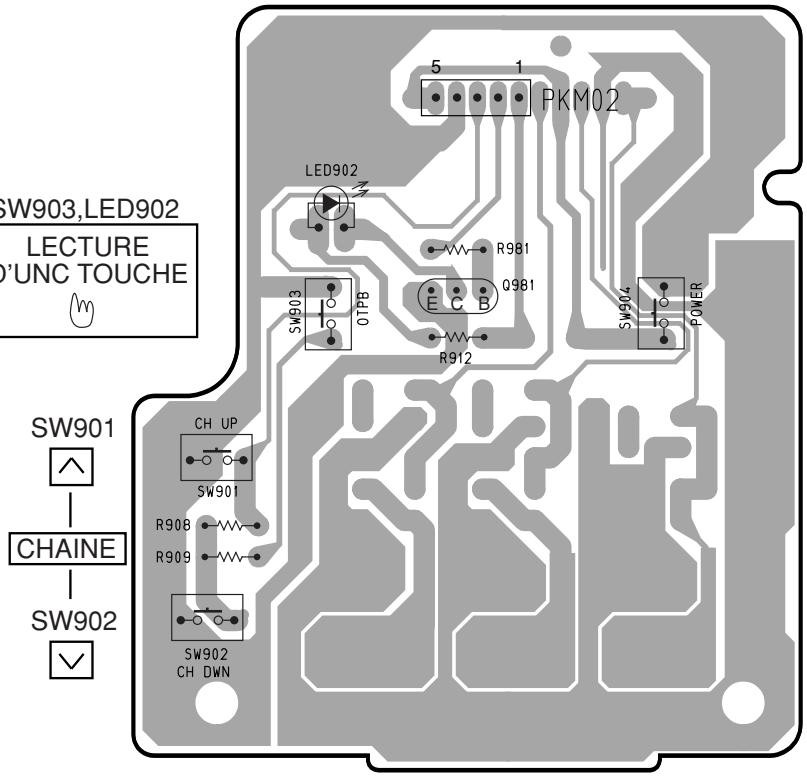
JK903 AUDIO-R
JK902 AUDIO-L
JK901 VIDEO

ENTREE(AV 3)

<HV-FX5850>

KEY 1 C.B

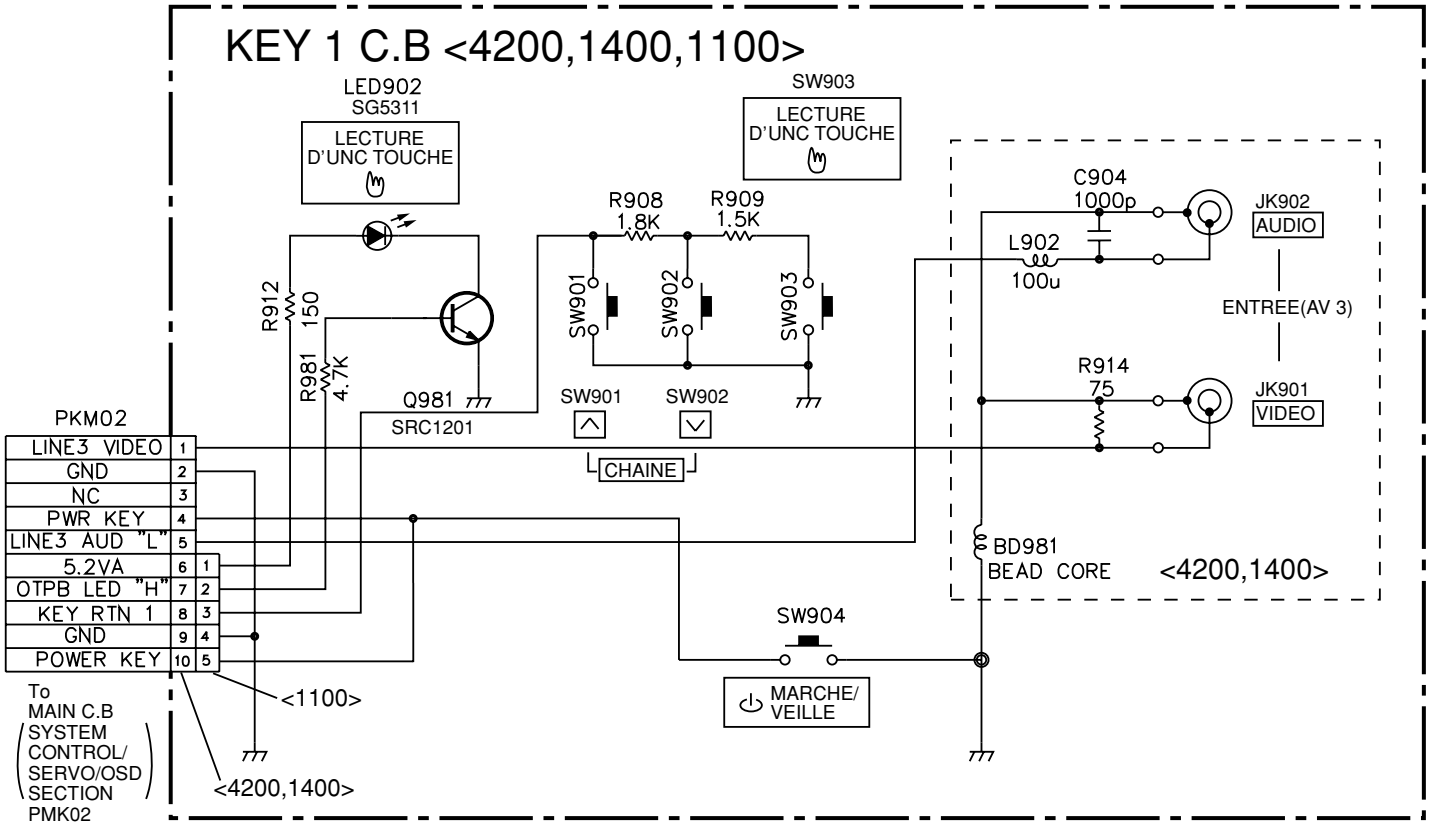
To
MAIN C.B
PMK02



SW903,LED902
LECTURE
D'UNC TOUCHE

SW904
MARCHE/
VEILLE

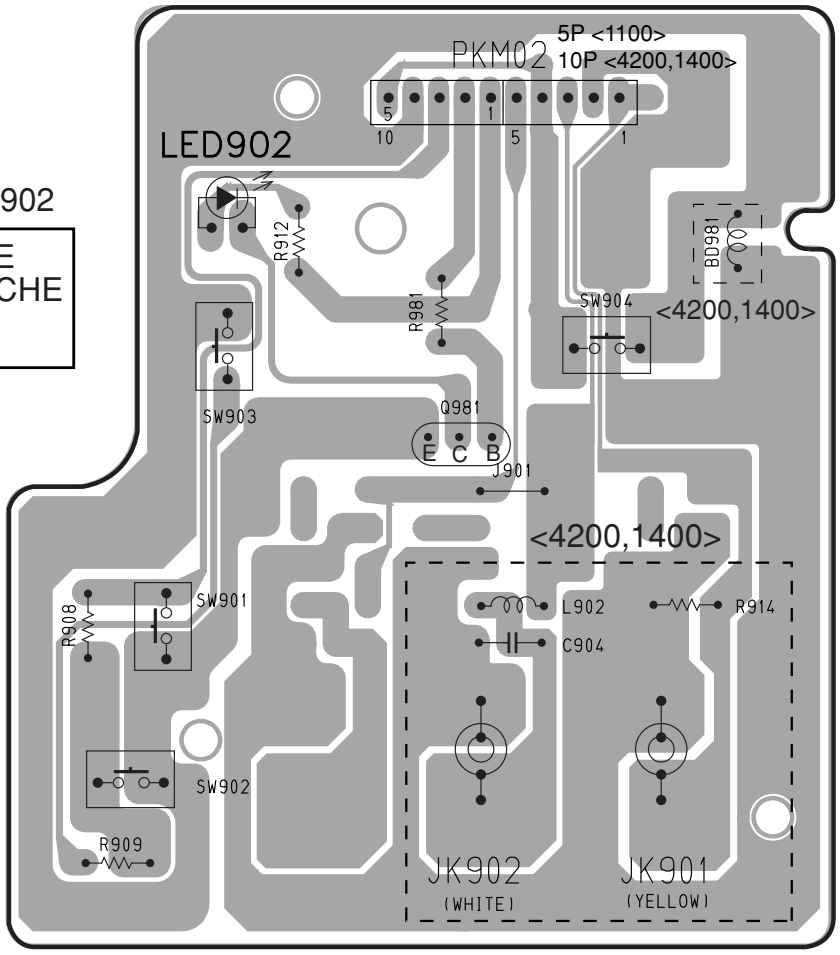
SW901
CHAINE
SW902


KEY 1 C.B <4200,1400,1100>
LED902
SG5311
LECTURE
D'UNC TOUCHE
SW903
LECTURE
D'UNC TOUCHE
R908
1.8K
R909
1.5K
C904
1000p
JK902
AUDIO
L902
100u
ENTREE(AV 3)
R912
150
R981
4.7K
SW901
SW902
SW903
Q981
SRC1201
SW901
SW902
R914
75
JK901
VIDEO
CHAINE
PKM02
LINE3 VIDEO 1
GND 2
NC 3
PWR KEY 4
LINE3 AUD "L" 5
5.2VA 6 1
OTPB LED "H" 7 2
KEY RTN 1 8 3
GND 9 4
POWER KEY 10 5
BD981
BEAD CORE
<4200,1400>
SW904
MARCHE/
VEILLE
To
MAIN C.B
SYSTEM
CONTROL/
SERVO/OSD
SECTION
PMK02
<1100>
<4200,1400>

<HV-FX4200/GX1400/GX1100>

KEY 1 C.B

To
MAIN C.B
PMK02



SW903,LED902

LECTURE
D'UNC TOUCHE

SW904

MARCHE/
VEILLE

SW901

CHAINE

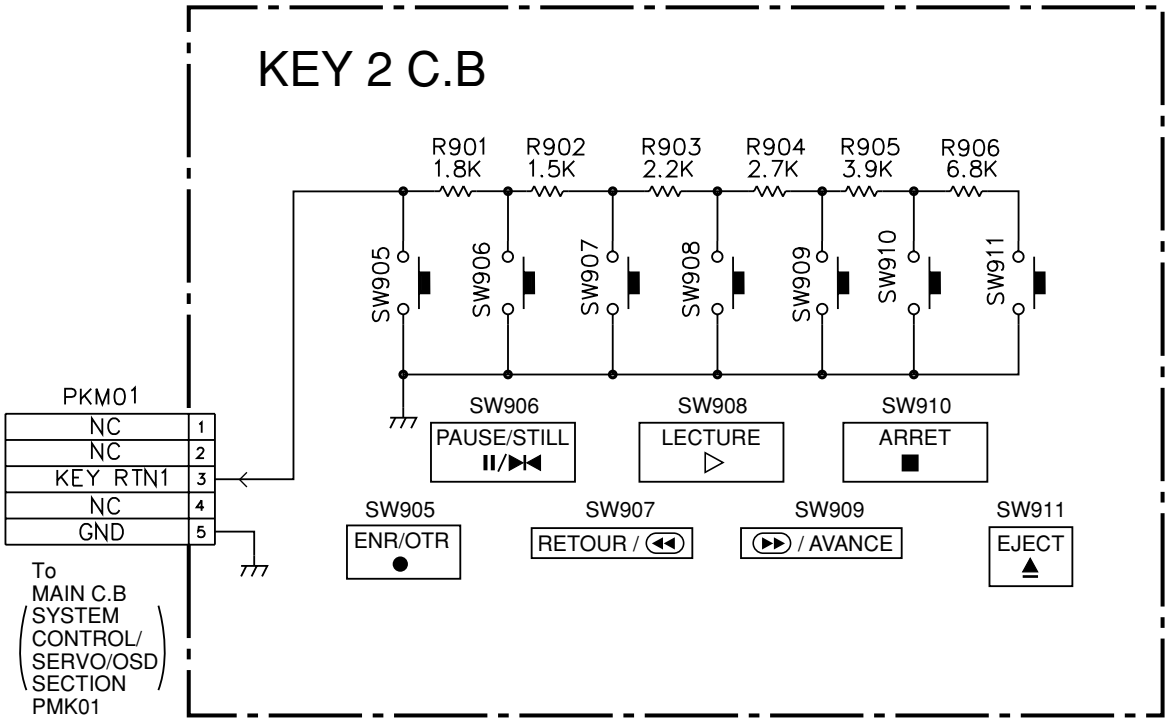
SW902

JK902
AUDIO-L

JK901
VIDEO

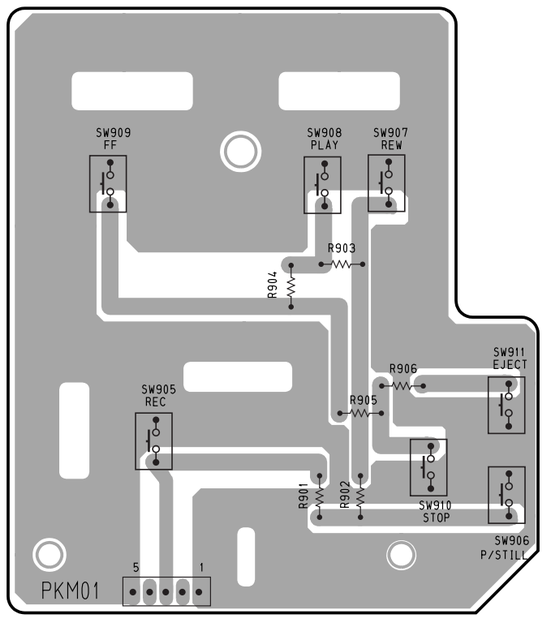
— ENTREE(AV 3) —

SCHEMATIC DIAGRAM -11/11 (KEY-2 C.B SECTION)



<HV-FX7800>

KEY 2 C.B



SW907
RETOUR / ◀◀

SW908
LECTURE ▷

SW909
▶▶ / AVANCE

SW911
EJECT ▲

SW905
ENR/OTR ●

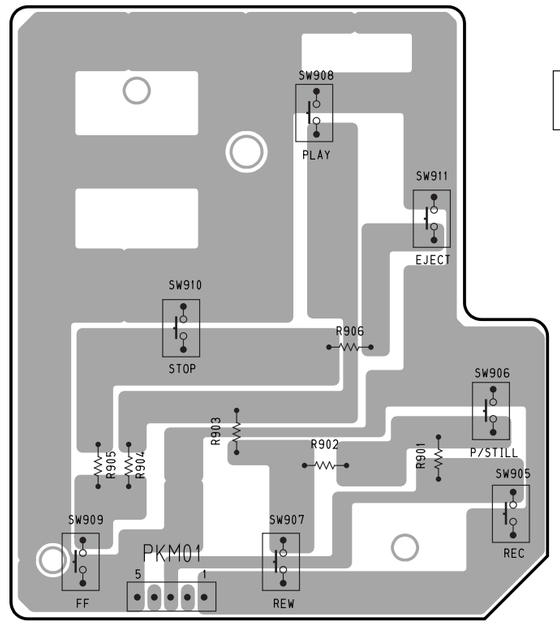
SW906
PAUSE/STILL II/▶|◀

SW910
ARRET ■

To
MAIN C.B
PMK01

<HV-FX4200/GX1400/GX1100>

KEY 2 C.B



SW908
LECTURE ▷

SW911
EJECT ▲

SW910
ARRET ■

SW906
PAUSE/STILL II/▶|◀

SW905
ENR/OTR ●

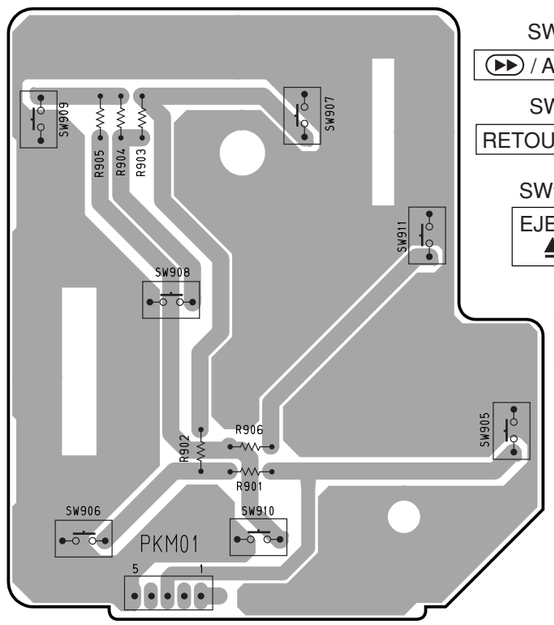
SW909
▶▶ / AVANCE

SW907
RETOUR / ◀◀

To
MAIN C.B
PMK01

<HV-FX5850>

KEY 2 C.B



SW909
▶▶ / AVANCE

SW907
RETOUR / ◀◀

SW911
EJECT ▲

SW908
LECTURE ▷

SW905
ENR/OTR ●

SW906
PAUSE/STILL II/▶|◀

SW910
ARRET ■

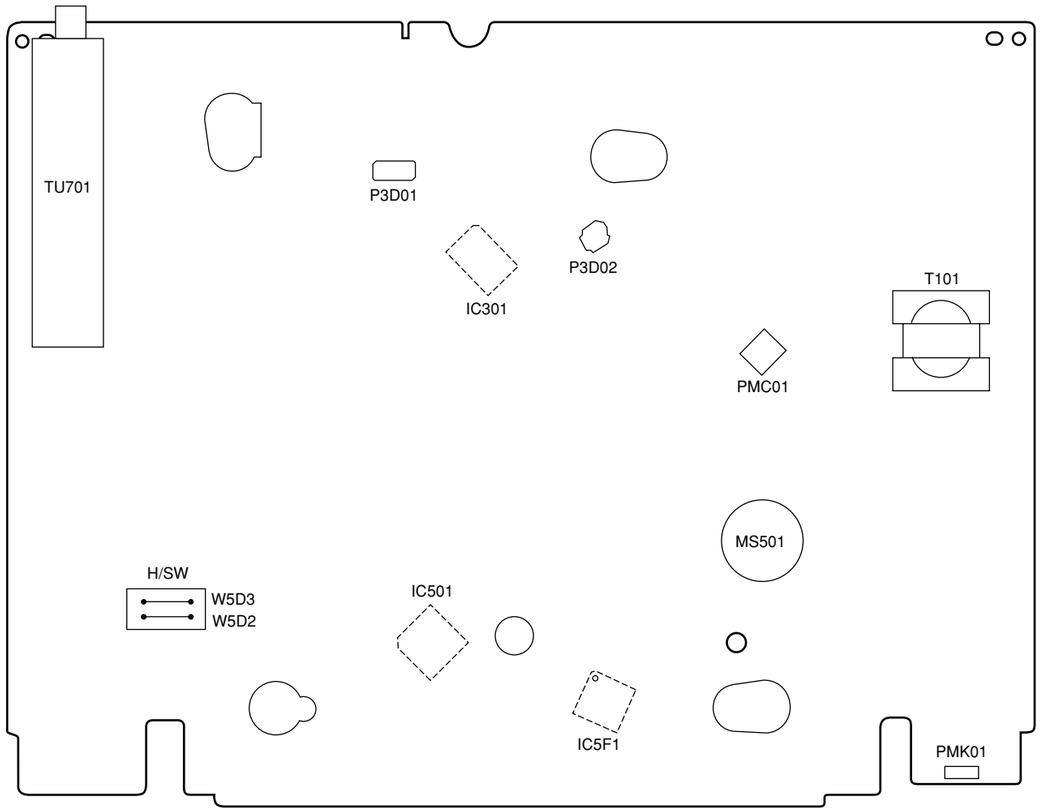
To
MAIN C.B
PMK01

Test Equipment

• Oscilloscope	• Test Tape
• AC Millivolt Meter	TTV-P1

Adjustment Location

MAIN C.B (TOP VIEW)



1. Servo Adjustment

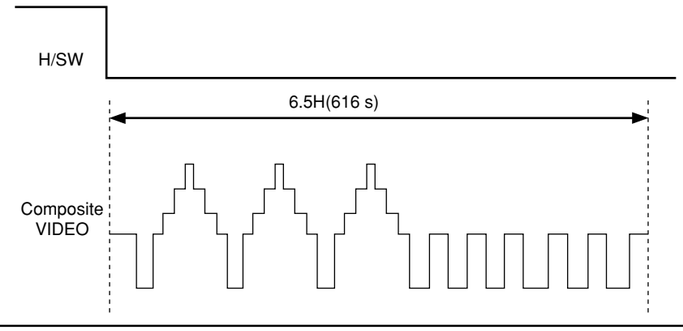
1) PG Adjustment

MODE	MEASUREMENT POINT	ADJUSTMENT POINT	SPECIFICATION
PLAY (TTV-P1)	VIDEO OUT H/SW (W5D2, W5D3)	'PLAY' KEY (SET) 'O' KEY (REMOCON)	6.5H ± 0.5H

• Adjustment Procedure

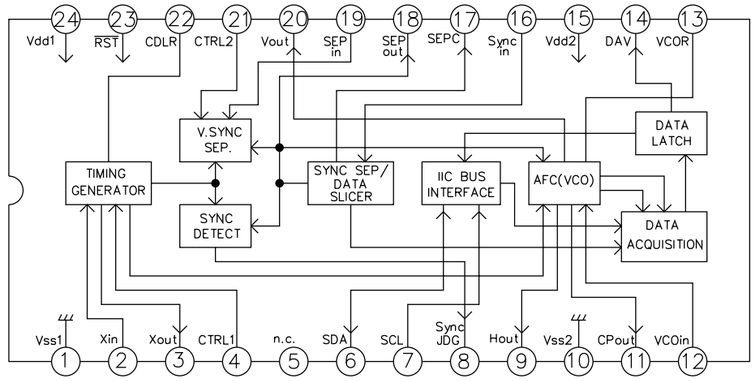
1. Insert the PAL SP Test Tape (TTV-P1) and play.
   Note - Adjust the distance of X, pressing the Tracking(+) or Tracking(-) when the “ATR” is blink after the PAL SP Test Tape is inserted.
2. Connect the CH1 of the oscilloscope to the H/SW (W5D2, W5D3) and CH2 to the Video Out for the VCR.
3. Trigger the mixed Video Signal of CH2 to the CH1 H.SW (W5D2, W5D3), and then check the distance (time difference), which is from the selected A(B) Head point of the H.SW(W5D2, W5D3) signal to the starting point of the vertical synchronized signal, to 6.5H ± 0.5H (416μs, 1H=64.0μs).

• WAVEFORM

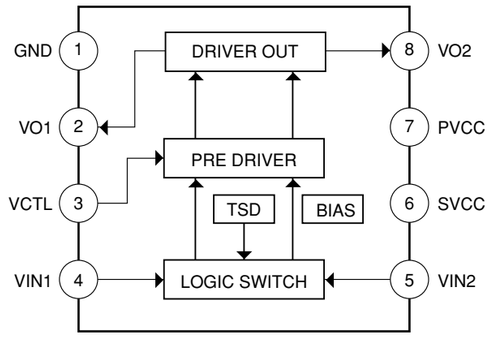


IC BLOCK DIAGRAM -1/1

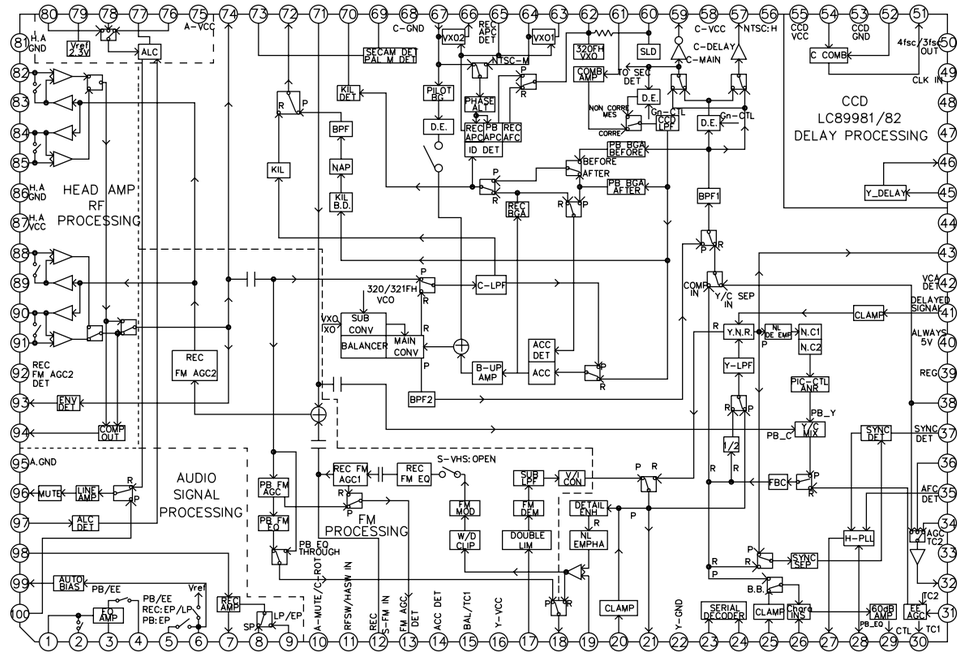
IC, LC74793



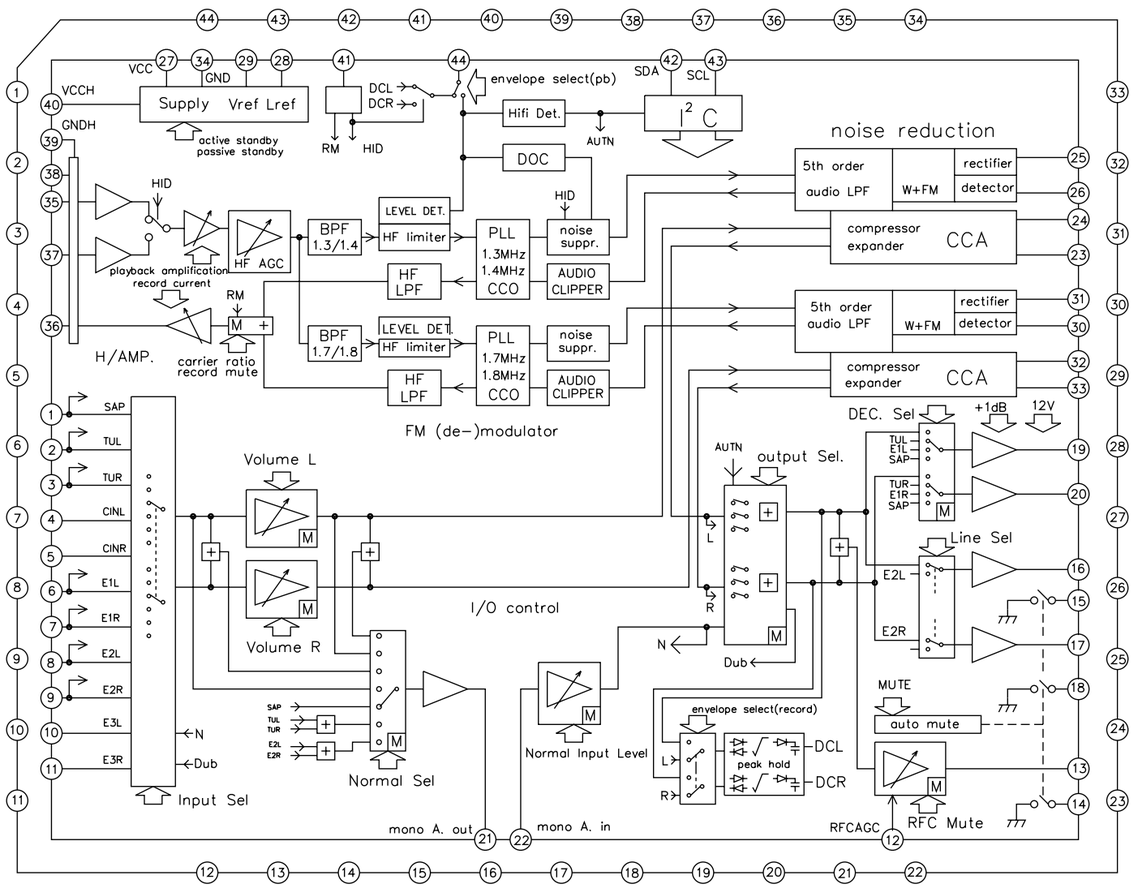
IC, FAN8082



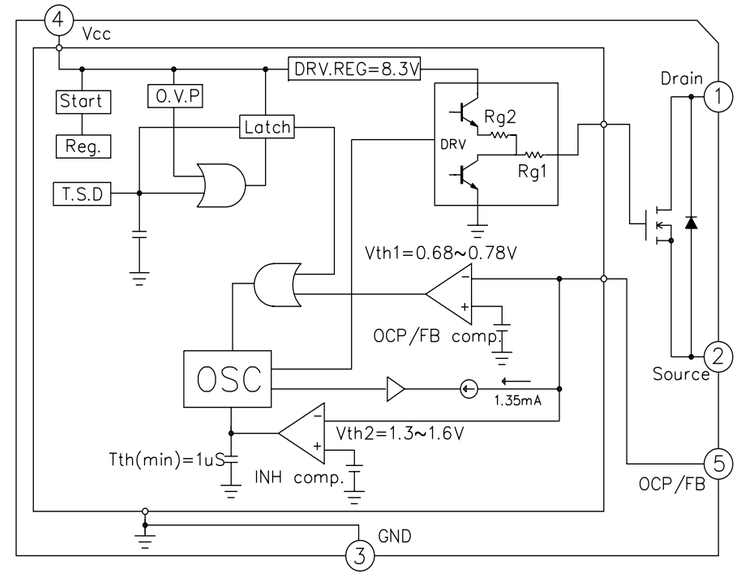
IC, LA71598HM



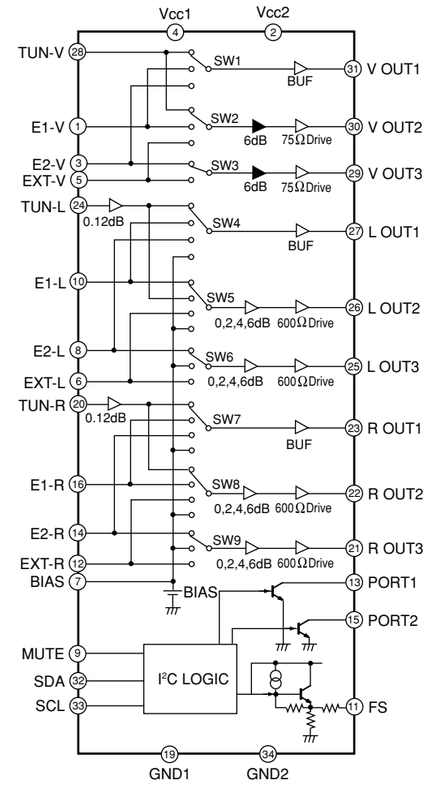
IC, TDA9605H



IC,STR-G6351L



IC, MM1443XJ



IC DESCRIPTION -1/4 (HD6432197A37FX) <HV-FX7800/FX5850> -1/3

Pin No.	Pin Name	I/O	Description
1	SVss	–	Servo Block GND
2	CTLref	O	CTL amp reference
3	CTL(+)	I/O	PB CTL in/REC CTL out (+)
4	CTL(–)	I/O	PB CTL in/REC CTL out (-)
5	CTL BIAS	I	CTL amp bias voltage
6	CTL FB	I	CTL feedback SW control
7	CTL AMP (O)	O	CTL amp output
8	CTL AMP (I)	I	CTL Schmitt amp input
9	CFG	I	CFG input
10	SVcc	–	Servo VCC (+5V)
11	AFCpc	I	SYNC SEPER. 'C' connect
12	AFCosc	I	SYNC SEPER. AFC osc
13	AFCLPF	I	SYNC SEPER. LPF connect
14	C_SYNC	I	SYNC SEPER. for SERVO
15	VLPF/VSYNC	–	Not connected
16	Cvin2	I	NTSC CAPTION DATA VIDEO
17	Cvin1	I	OSD VIDEO SIGNAL
18	OSD Vcc	–	OSD VCC (+5V)
19	CVout	O	Video signal output
20	OSD_VSS	I	OSD Block GND
21	4FSC OUT	–	SUB-CARRIER OSC.
22	4FSC IN	I	SUB-CARRIER OSC.
23	AVss	–	A/D Block GND
24	V.ENV	I	Video envelope input
25	A.ENV	I	Audio envelope input
26	PG ADJ	I	PG adjustment
27	AFT	I	Tuner AFT in
28	KEY0	I	Key Return 0. Pannel key.
29	KEY1	I	Key Return 1. Pannel key.
30	CST SW	I	CST/SW REC tab check
31	A. LEVEL (L)	I	Level meter L-ch
32	A. LEVEL (R)	I	Level meter R-ch
33	SECAM DET 'H'	I	SECAM detect 'H' (SECAM signal check)
34	C+ DETECT	I	C+ detect/av 2 state del.
35	NOT USED	–	Not used
36	A/D Vcc	–	A/D Block VCC 5 V
37	P.FAIL	I	Power failure detect
38	PWR KEY	I	2 W wake up power key
39	CSYNC_IN	I	SYNC detect for CH tuning
40	A.MUTE 'H'	O	Audio mute 'H'
41	S2V.IN 'H'	O	Check canal in 2 W
42	SE/MESECAM 'H'	O	OSD control in SECAM/MESECAM

Pin No.	Pin Name	I/O	Description
43	R/C IN	I	Remote data input
44	CT DETECT	I	C + detect
45	NC	–	Not connected
46	NC	–	Not connected
47	REC 'H'	O	High out at REC mode
48	OTPB 'H'	O	OTPB 'H'
49	T/UP REEL	I	Take-up reel pulse in
50	CAP. REV 'H'	O	CAP reverse 'H'
51	TOP SENSOR	I	Tape reader check at top
52	NC	–	Not connected
53	NC	–	Not connected
54	NC	–	Not connected
55	NC	–	Not connected
56	MAIN VCC	–	Micom +5 V VCC
57	MAIN VSS	–	Micom GND
58	HSR 'H'	O	High speed rewind 'H'
59	IIC CLK	O	IIC bus clock line
60	IIC DATA	I/O	IIC bus data line
61	TIMER 'H'	O	6 W mode power SW
62	P. CTL 'H'	O	High during power on
63	FLD CLK	O	FLD interface clock out
64	FLD DATA OUT	O	FLD interface data out
65	FLD DATA IN	I	FLD interface data in
66	FLD ENA	O	FLD control enable 'H'
67	STAND BY 'H'	O	2W mode power switching
68	MODE SW 4	I	Mode switch data 4
69	MODE SW 3	I	Mode switch data 3
70	MODE SW 2	I	Mode switch data 2
71	MODE SW 1	I	Mode switch data 1
72	LD (–)	O	Loading motor drive (-)
73	LD (+)	O	Loading motor drive (+)
74	FWE	–	Flash write made control pin (Not used in mask)
75	X2 (32.768kHz/OUT)	O	32.768 kHz cristal out
76	X1 (32.768kHz/IN)	I	32.768 kHz cristal in
77	$\overline{\text{RES}}$	I	Micom reset pin ('L' active)
78	OSC1 (IN)	I	10 MHz in
79	Vss	–	SYSCON GND
80	OSC2 (OUT)	O	10 MHz out
81	VCL	I	Connect 'C' to VSS
82	MDO	I	Mandatory 'high' connect
83	D. ADJ	O	Drum control at slow

Pin No.	Pin Name	I/O	Description
84	CAP ACCEL	O	Capstan control at slow
85	I-LIMIT	O	Capstan current control
86	S. MONITOR2	–	Not connected
87	S. MONITOR1	–	Not connected
88	NC	–	Not connected
89	NC	–	Not connected
90	NC	–	Not connected
91	NC	–	Not connected
92	SUP. REEL	I	Supply reel pulse in
93	TU. SEC VL 'H'	O	High out at SECAM VHF-L
94	TU. SEC 'H'	O	High out at tuner SECAM
95	END SENSOR	I	Tape leader check at end
96	LP REC MUTE 'H'	O	Hi-Fi audio is muted during LP recording
97	16:9 'H'	O	TV wide screen
98	SCART 'H'	O	TV AUTO line
99	C. ROT	O	Color rotary switching
100	H. AMP SW	O	Head amp SW output
101	COMP IN	I	Comparator input
102	NC	–	Not connected
103	DPG	I	DPG input
104	DFG	I	DFG input
105	V.H/SW	O	Video head SW
106	A.H/SW	O	Audio head SW
107	DRUM PWM	O	Drum ctl voltage
108	CAP.PWM	O	Capstan ctl voltage
109	V PULSE	O	Dammy V-SYNC
110	VSS	–	Micom GND
111	C.SYNC IN	I	Composite video in
112	VCC	–	Micom VCC (+5 V)

IC DESCRIPTION -2/4 (HD6432197A37FX) <HV-FX4200/GX1400/GX1100> -1/3

Pin No.	Pin Name	I/O	Description
1	SVss	–	Servo Block GND
2	CTLref	O	CTL amp. reference
3	CTL (+)	I/O	PB CTL in/REC CTL out (+)
4	CTL (–)	I/O	PB CTL in/REC CTL out (-)
5	CTL BIAS	I	CTL amp bias voltage
6	CTL FB	I	CTL feedback SW control
7	CTL AMP (O)	O	CTL amp output
8	CTL SMT (I)	I	CTL Schmitt amp input
9	CFG	I	CFG input
10	SVcc	–	Servo Vcc (+5V)
11	AFCpc	I	SYNC SEPER.'C'connect
12	AFCosc	I	SYNC SEPER.AFC osc
13	AFCLPF	I	SYNC SEPER.LPF connect
14	C_SYNC	I	SYNC SEPER.for servo
15	VLPF/VSYNC	–	Not connected
16	Cvin2	I	NTSC CAPTION DATA VIDEO
17	Cvin1	I	OSD VIDEO SIGNAL
18	OSD Vcc	–	OSD Vcc (+5V)
19	CVout	O	Video signal output
20	OSD_VSS	–	OSD GND
21	4FscOUT	O	SUB-CARRIER osc
22	4FscIN	I	SUB-CARRIER osc
23	AVss	–	A/D Block GND
24	V.ENV	I	Video envelope input
25	A.ENV	I	Audio envelope input
26	PG ADJ	I	For PG delay adjustment
27	AFT	I	Tuner AFT input
28	KEY0	I	Key Return 0
29	KEY1	I	Key Return 1
30	CST SW	I	CST SW/REC TAB Check
31	A. LEVEL (L)	I	Audio (L) input to drive level meter
32	A. LEVEL (R)	I	Audio (R) input to drive level meter
33	SECAM DET 'H'	I	SECAM detect "H"
34	C+ DETECT	I	C+ detect/av2 state det.
35	NOT USED	–	Not used
36	A/D Vcc	–	A/D Block Vcc 5V
37	P.FAIL	I	Power failure detect
38	PWR KEY	I	2W WAKE UP POWER KEY
39	CSYNC_IN	I	SYNC detect for ch tunning
40	A.MUTE 'H'	O	AUDIO MUTE 'H'
41	S2V.IN 'H'	–	Check canal in2W (Not connected)

Pin No.	Pin Name	I/O	Description
42	SE/MESECAM 'H'	O	Osd control in secam/mesecam
43	R/C IN	I	Remote data input
44	C + DETECT	I	C + detect
45	N.C	–	Not connected
46	VCR 'H'	–	Not connected
47	REC 'H'	O	High out at rec mode
48	OTPB	O	OTPB "H"
49	T/UP REEL	I	Take-up reel pulse input
50	CAP. REV 'H'	O	CAP reverse "H"
51	TOP SENSOR	I	Tape leader check at top
52	PWR CTL "H"	O	Power control
53	SCART "H"	O	TV/VCR mode control in scart model
54	TUN.SEC.VL"H"	O	Secam VHF L band "H"
55	TUN.SEC."H"	–	Tuner secam signal det."H"(Not connected)
56	MAIN VCC	–	Micom power supply
57	MAIN VSS	–	Micom GND
58	HSR 'H'	–	High speed rewind "H"(Not connected)
59	IIC CLK	O	IIC bus clock line
60	IIC DATA	I/O	IIC bus data line
61	TIMER 'H'	O	6w mode power sw
62	GRID 5	O	Grid 5 control
63	GRID 4	O	Grid 4 control
64	GRID 3	O	Grid 3 control
65	GRID 2	O	Grid 2 control
66	GRID 1	O	Grid 1 control
67	STAND BY 'H'	O	2W mode power switching
68	MODE SW 4	I	Mode switch data4 input
69	MODE SW 3	I	Mode switch data3 input
70	MODE SW 2	I	Mode switch data2 input
71	MODE SW 1	I	Mode switch data1 input
72	LD (–)	O	Loading motor drive (-)
73	LD (+)	O	Loading motor drive (+)
74	FWE	–	Flash write mode control pin(Not used in mask)
75	X2 (32.768kHz/OUT)	O	32.768 kHz cristal out
76	X1 (32.768kHz/IN)	I	32.768 kHz cristal in
77	RES	I	Micom reset pin (“L” active)
78	OSC1 (IN)	I	For the connection of 10 MHz OSC
79	Vss	–	Micom GND
80	OSC2 (OUT)	O	For the connection of 10 MHz OSC
81	VCL	I	Connect 'C' to Vss
82	MDO	I	Mandatory 'H' connect

Pin No.	Pin Name	I/O	Description
83	D. ADJ	O	Drum control output during slow
84	CAP ACCEL	O	Capstan control at slow
85	I-LIMIT	O	Capstan current control
86	S. MONITOR2	–	Servo monitor 2(Not connected)
87	S. MONITOR1	–	Servo monitor 1(Not connected)
88	SEG 1	O	LED segment "H"
89	SEG 2	O	LED segment "H"
90	SEG 3	O	LED segment "H"
91	SEG 4	O	LED segment "H"
92	SEG 5	O	LED segment "H"
93	SEG 6	O	LED segment "H"
94	SEG 7	O	LED segment "H"
95	SEG 8	O	LED segment "H"
96	SEG 9	O	LED segment "H"
97	16:9 'H'	O	TV wide screen
98	END SENSOR	I	End sensor input
99	C. ROT	O	Color rotary SW signal output
100	H. AMP SW	O	Head amp SW output
101	COMP IN	–	Comparator input(Not connected)
102	SUP.REEL	I	Supply reel pulse input
103	DPG	I	DPG input
104	DFG	I	DFG input
105	V.H/SW	O	V.HD/SW output
106	A.H/SW	–	A.HD/SW output(Not connected)
107	DRUM PWM	O	Drum PWM control
108	CAP.PWM	O	Capstan PWM control
109	DV. SYNC	O	Dummy v-sync
110	VSS	–	Micom GND
111	C.SYNC IN	I	Composite video input
112	VCC	–	Micom Vcc (+5V)

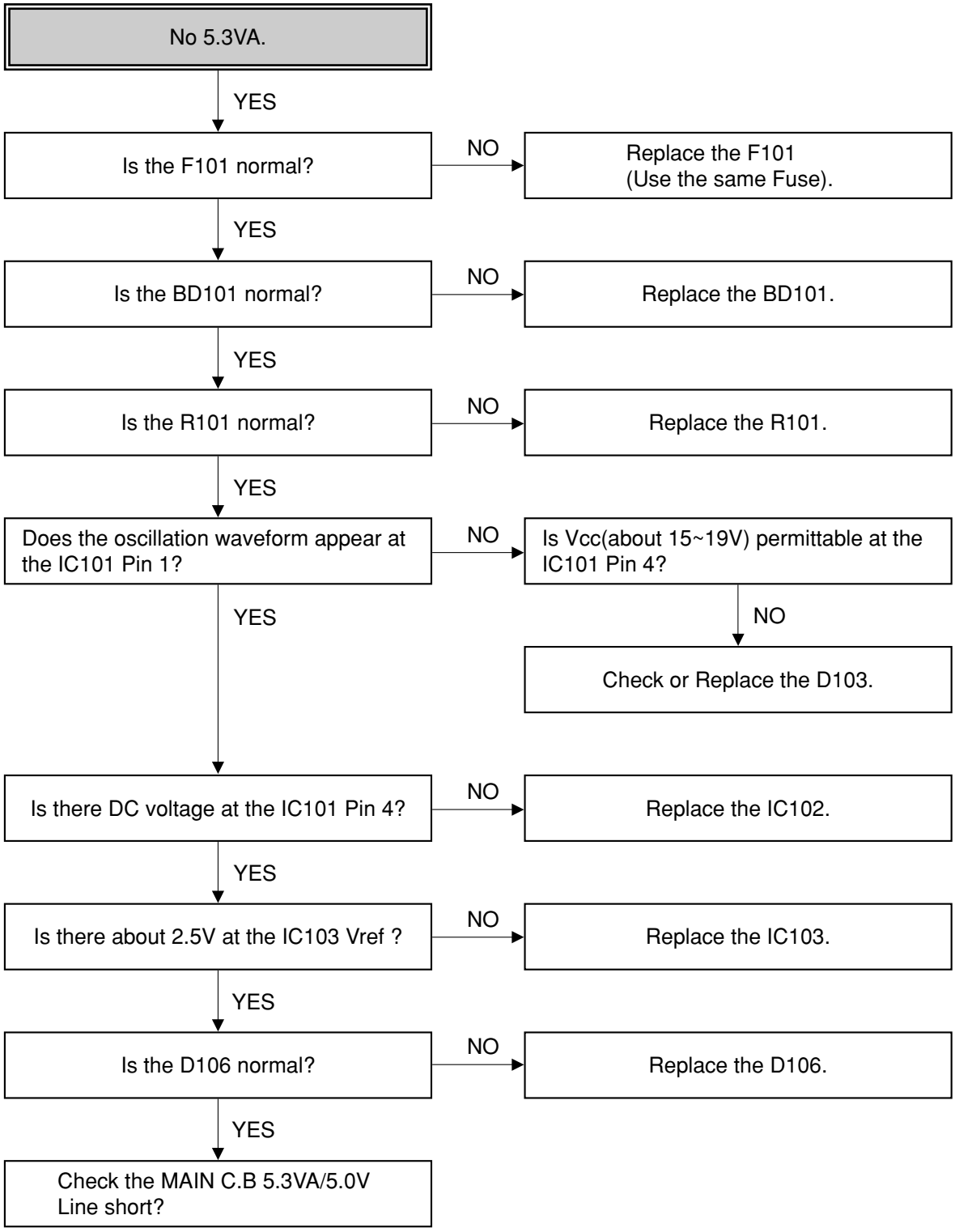
IC DESCRIPTION -3/4 (MSP3417D-QG) -1/1

Pin No.	Pin Name	I/O	Description
1	AVSUP	–	Analog power supply +5 V
2	ANA IN+	I	IF inputt
3	ANA IN-	I	CTL(+) input/output
4	TESTEN	–	Test pin (Not used)
5	XTAL IN	I	Crystal oscillator
6	XTAL OUT	0	Crystal oscillator
7	TP	–	Test pin (Not used)
8	D CTR OUT1	–	Digital control output 1 (Not connected)
9	D CTR OUT0	–	Digital control output 0 (Not connected)
10	ADR SEL	–	I^2C bus address select
11	STANDBYQ	I	Standby (low-active)
12	I^2C CL	I/O	I^2C clock
13	I^2C DA	I/O	I^2C data
14 ~ 18	TP	–	Test pin (Not used)
19	DVSUP	–	Digital power supply +5 V
20	DVSS	–	Digital ground
21	TP	–	Test pin (Not used)
22	RESETQ	–	Power pri reset
23, 24	TP	–	Test pin (Not used)
25	VREF2	–	Reference ground 2 high voltage part
26	DACM R	–	Loudspeaker out, right (Not connected)
27	DACM L	I	Loudspeaker out, left (Not connected)
28	TP	–	Test pin (Not used)
29	VREF1	–	Reference ground 1 high voltage part
30	SC1 OUT R	O	Scart output 1, right
31	SC1 OUT L	O	Scart output 1, left
32	NC	–	Not connected
33	AHVSUP	–	Analog power supply 8.0 V
34	CAPL M	–	Volume capacitor MAIN (Not connected)
35	AHVSS	–	Analog ground
36	AGNDC	–	Analog reference voltage high voltage part
37 ~39	NC	–	Not connected
40	SC1 IN L	–	Scart input 1 in, left (Not connected)
41	SC1 IN R	–	Scart input 1 in, right (Not connected)
42	VREFTOP	–	Reference voltage IF A/D converter
43	MONO IN	I	Mono input
44	AVSS	–	Analog ground

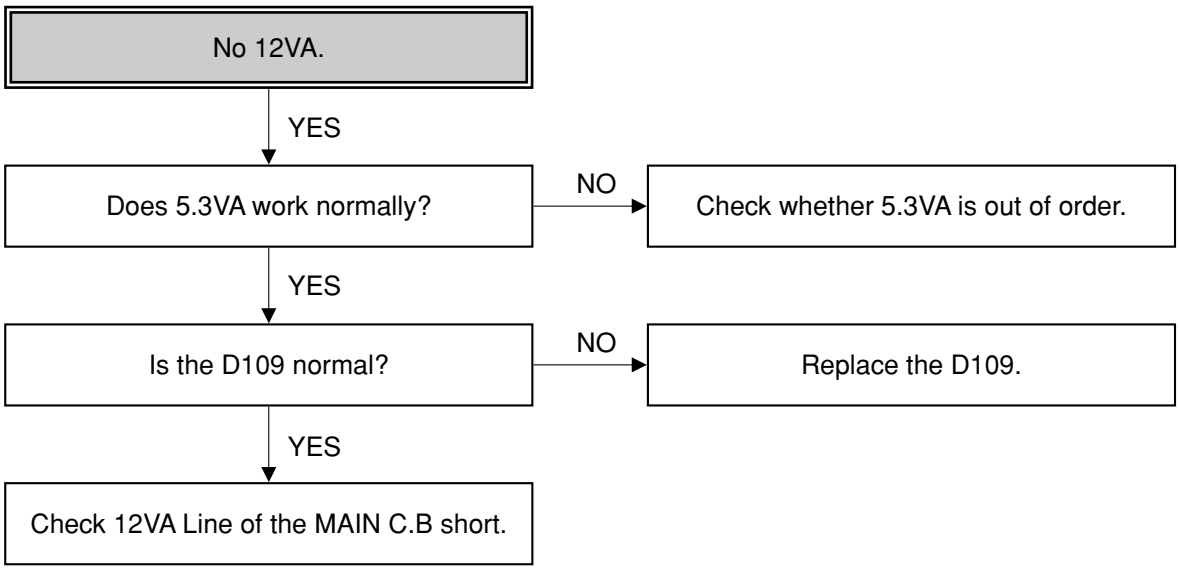
Pin No.	Pin Name	I/O	Description
1	VSS1	–	Connected to ground (ground of digital circuits)
2	XTAL IN	I	For the connection of crystal or capacitors of crystal oscillator, or external clock input
3	XTAL OUT	–	
4	CTRL1	I	L: Crystal oscillator; H: External clock input
5	NC	–	Not connected
6	SDA	I/O	PDC/VPS data input/output pin
7	SCL	I/O	Clock input for PDC/VPS data
8	SYNCJDC	–	Not connected
9	HOUT	–	Horizontal sync output
10	VSS2	–	Ground
11	CPOUT	O	Charge pump output. An LPF is connected.
12	VCOIN	I	Voltage input for VCO control
13	VCOR	–	For the connection of resistors for adjusting VCO oscillation range
14	DAV	–	Outputs 'L' when PDC/VPS data can be detected.
15	VDD2	–	Power supply (+5V VCO)
16	SYNIN	I	Video signal input to internal sync separator
17	SEPC	–	Slice level check pin
18	SEPOUT	–	Outputs composite sync signal from internal sync separator. (Not connected)
19	SEPIN	–	Vertical sync input. Fix to VDD1 when not used.
20	VOUT	–	Vertical sync output. (Not connected)
21	CTRL2	–	SEP input control. L: V.SYNC not input; H: V.SYNC input
22	CDLR	–	For the connection of resistors for adjusting clock phase
23	$\overline{\text{RST}}$	–	Reset input
24	VDD1	–	Power supply (+5V)

1. Power Circuit(SMPS)

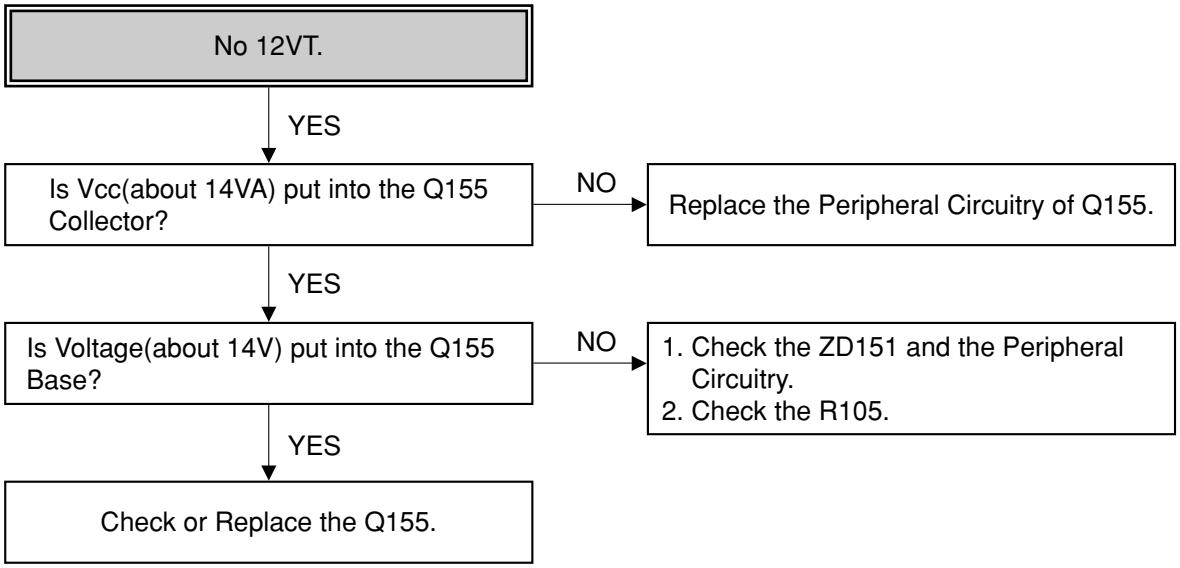
(1) No 5.3VA.



(2) No 12VA.(Capstan)

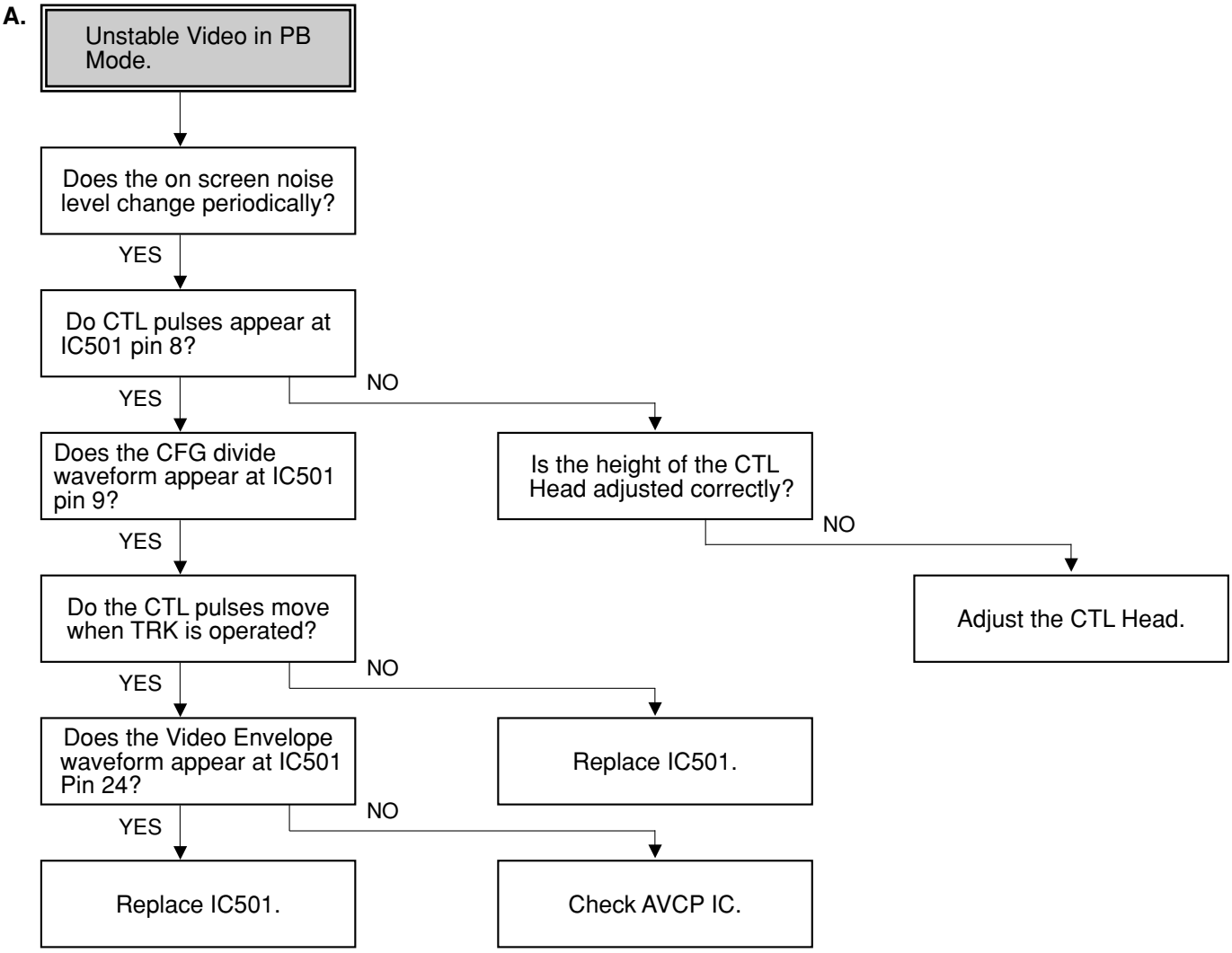


(3) No 12VT (CANAL, Buffer)

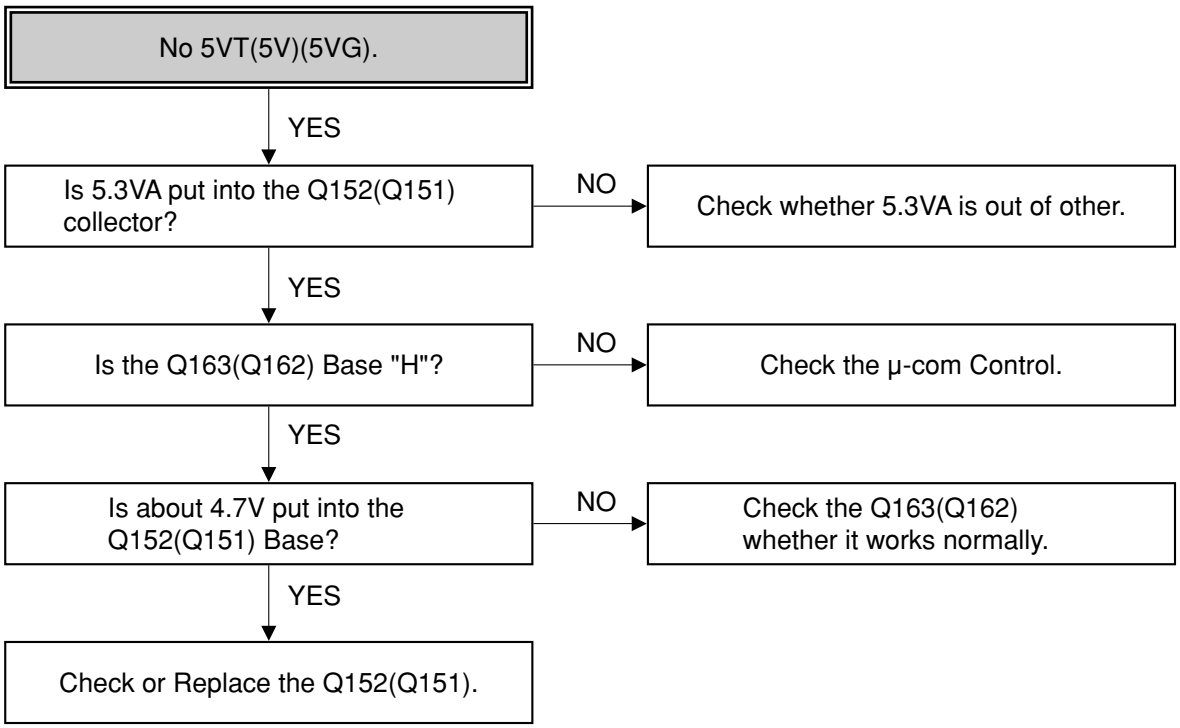


2. Servo Circuit

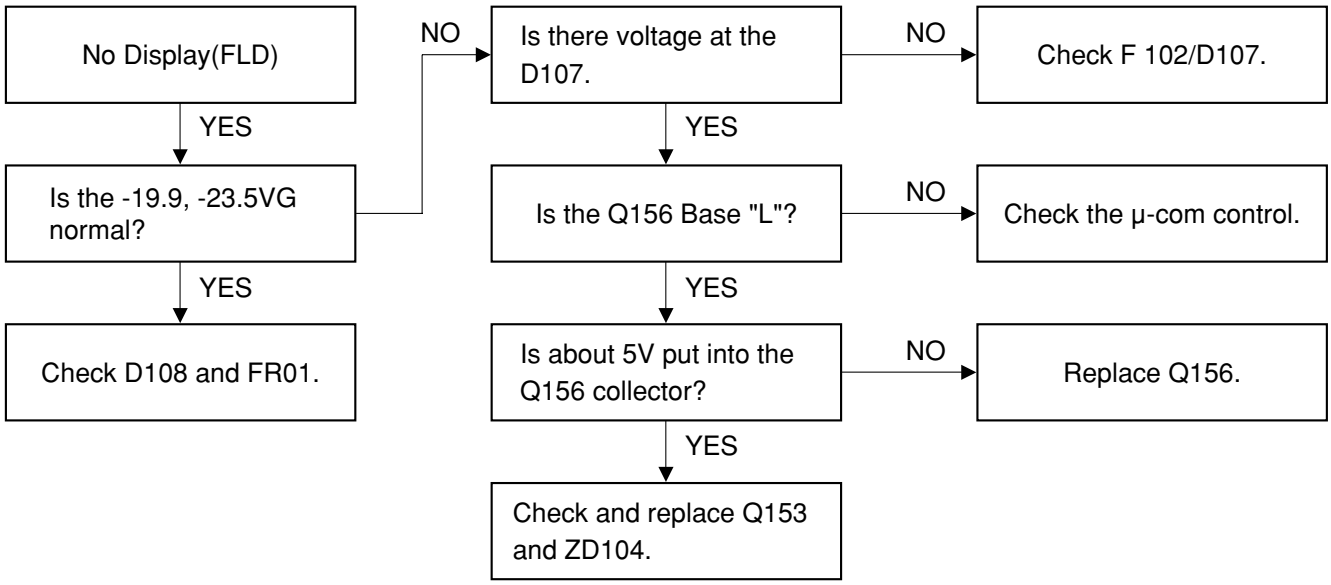
A.



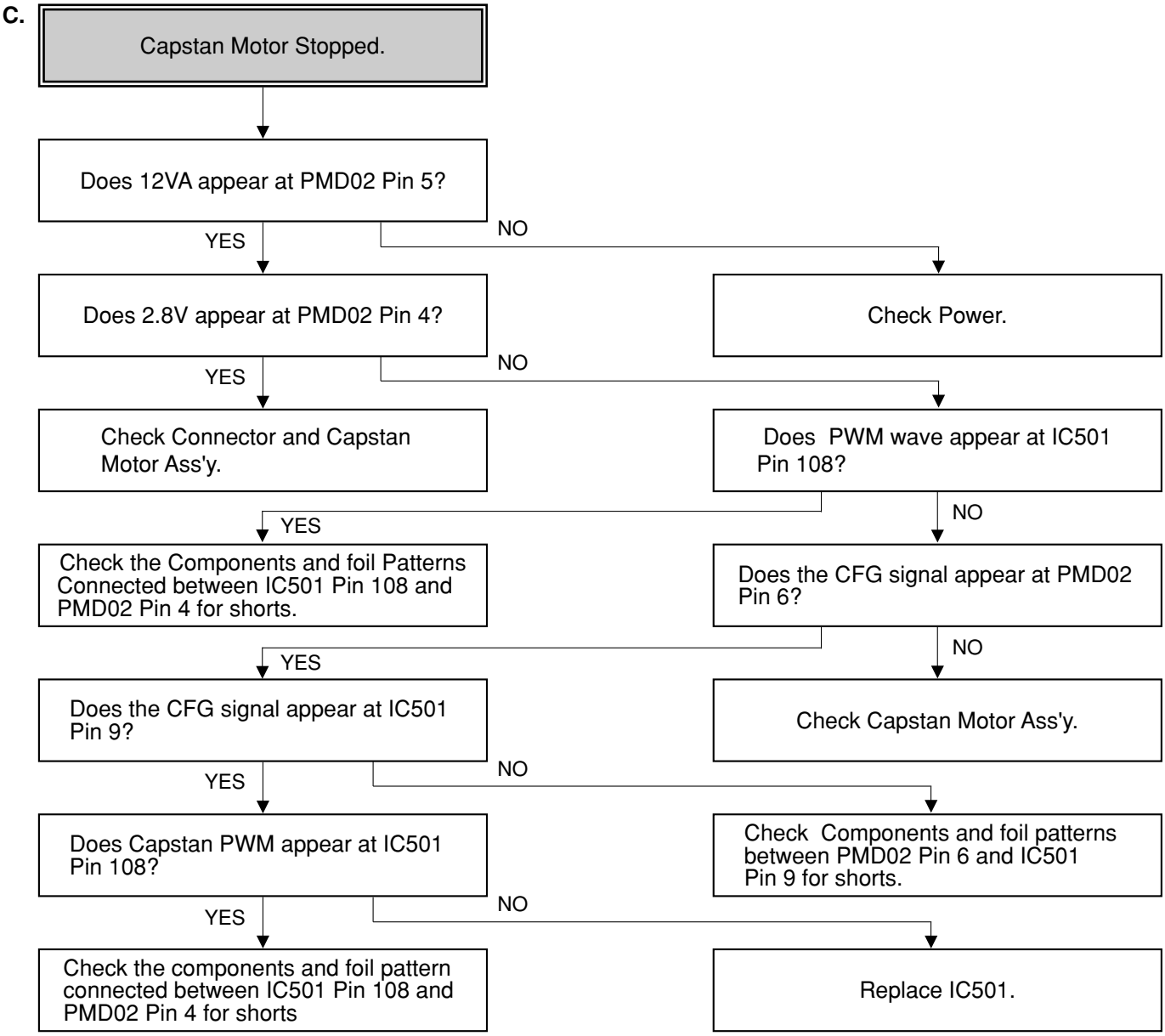
(4) No 5VT(5V)



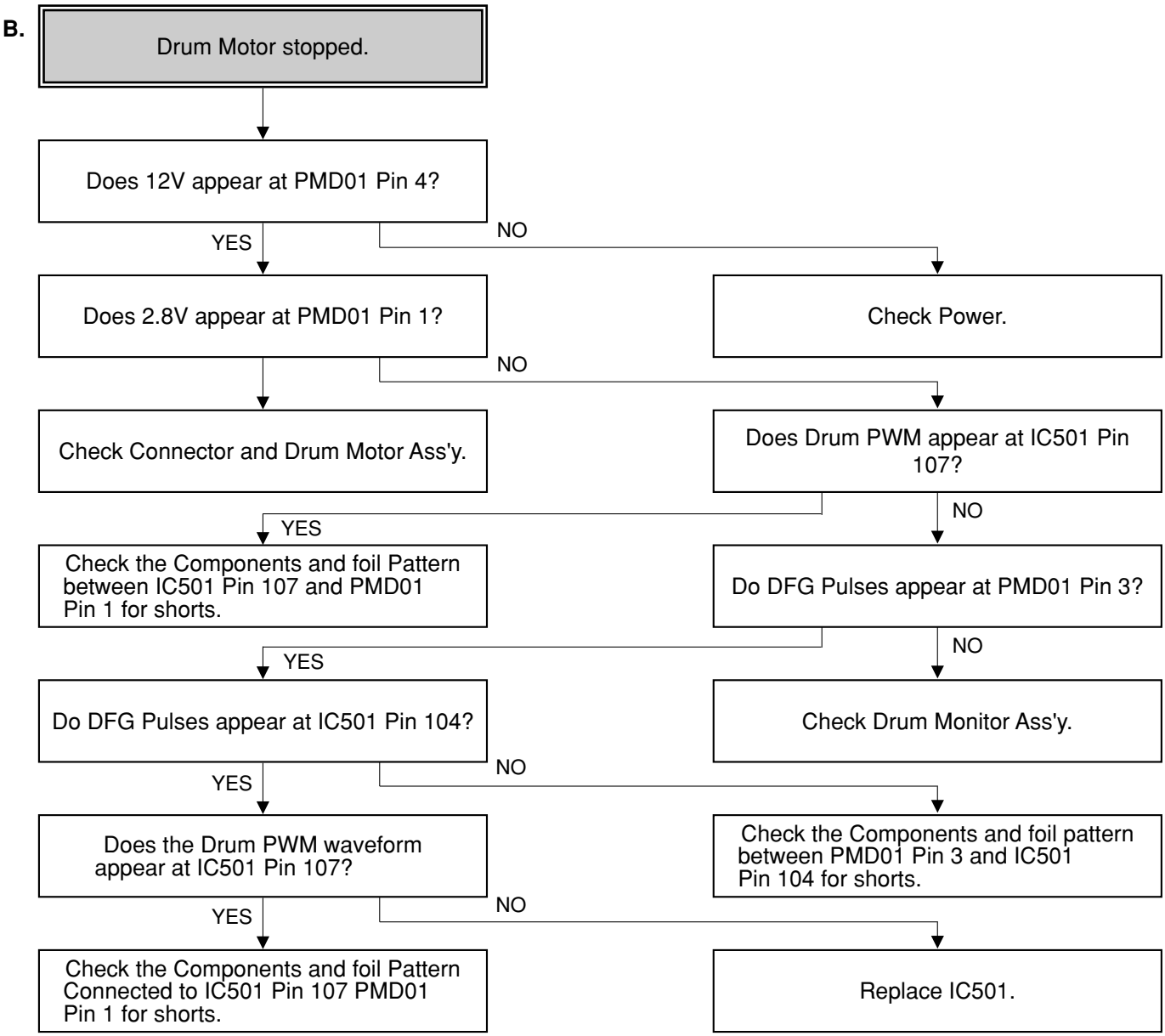
(Hi-Fi Only)



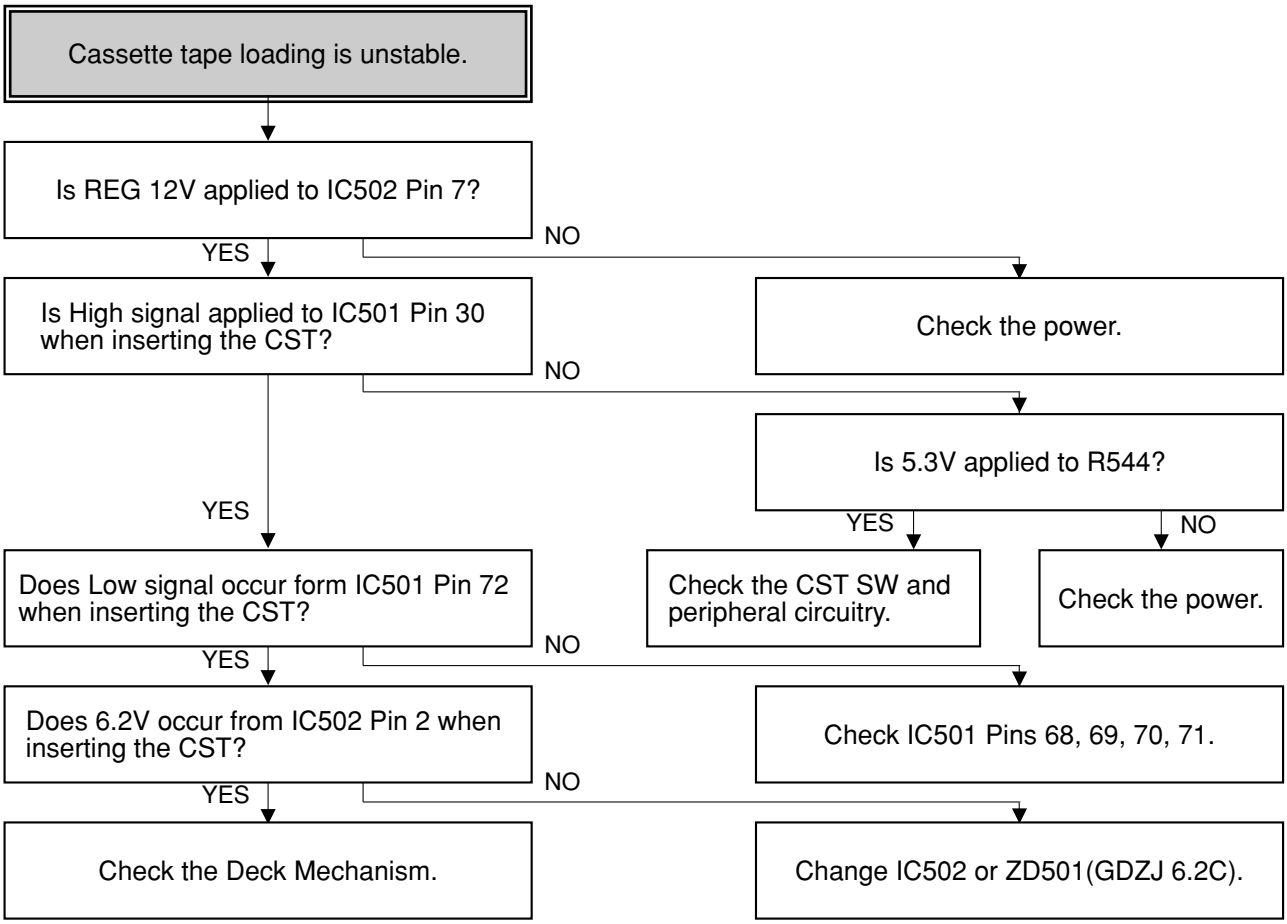
C.


Capstan Motor Stopped.
Does 12VA appear at PMD02 Pin 5?
YES
NO
Does 2.8V appear at PMD02 Pin 4?
Check Power.
YES
NO
Check Connector and Capstan Motor Ass'y.
Does PWM wave appear at IC501 Pin 108?
YES
NO
Check the Components and foil Patterns Connected between IC501 Pin 108 and PMD02 Pin 4 for shorts.
Does the CFG signal appear at PMD02 Pin 6?
YES
NO
Does the CFG signal appear at IC501 Pin 9?
Check Capstan Motor Ass'y.
YES
NO
Does Capstan PWM appear at IC501 Pin 108?
Check Components and foil patterns between PMD02 Pin 6 and IC501 Pin 9 for shorts.
YES
NO
Check the components and foil pattern connected between IC501 Pin 108 and PMD02 Pin 4 for shorts
Replace IC501.

B.

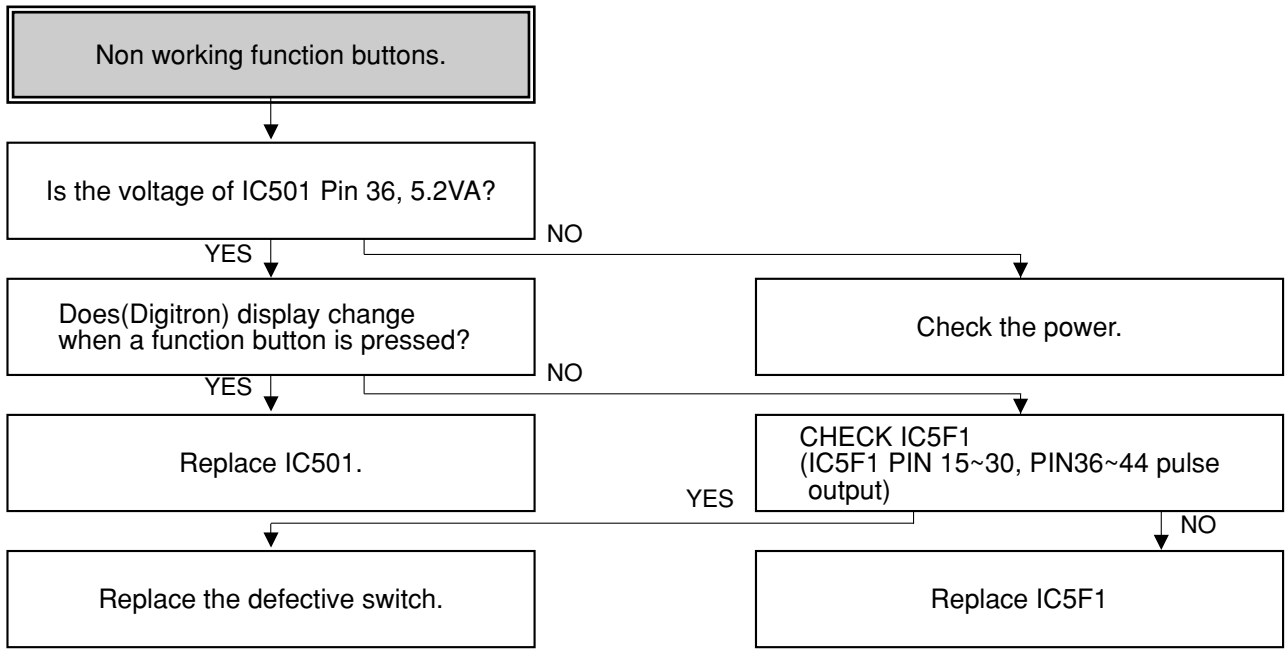

Drum Motor stopped.
Does 12V appear at PMD01 Pin 4?
NO
YES
Check Power.
Does 2.8V appear at PMD01 Pin 1?
NO
Check Connector and Drum Motor Ass'y.
Does Drum PWM appear at IC501 Pin 107?
NO
YES
Check the Components and foil Pattern between IC501 Pin 107 and PMD01 Pin 1 for shorts.
Do DFG Pulses appear at PMD01 Pin 3?
NO
YES
Do DFG Pulses appear at IC501 Pin 104?
Check Drum Monitor Ass'y.
NO
YES
Does the Drum PWM waveform appear at IC501 Pin 107?
Check the Components and foil pattern between PMD01 Pin 3 and IC501 Pin 104 for shorts.
NO
YES
Check the Components and foil Pattern Connected to IC501 Pin 107 PMD01 Pin 1 for shorts.
Replace IC501.

B.

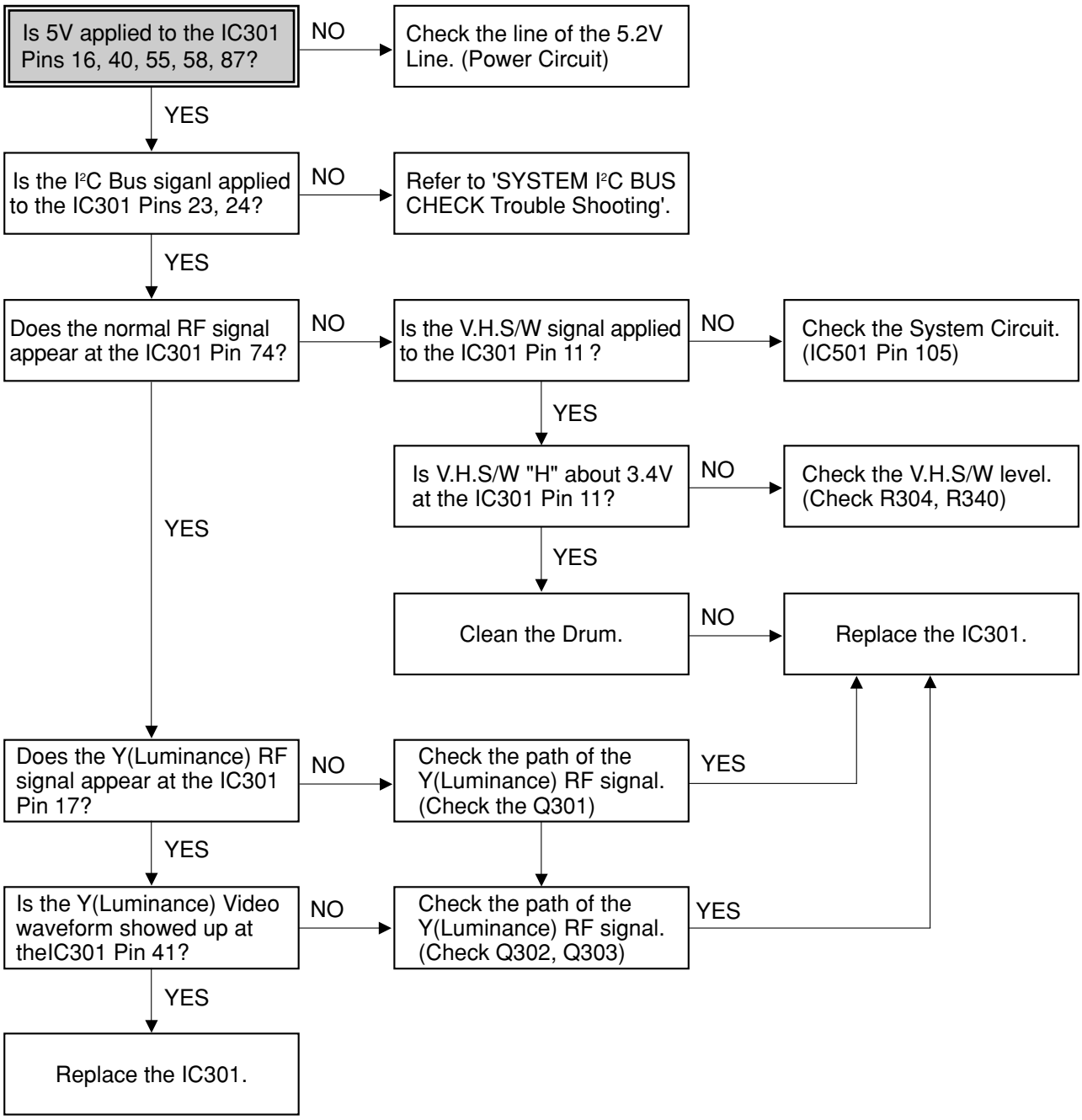


NOTE : Auto stop may also be caused by lack of lubrication,due to dried grease or oil.

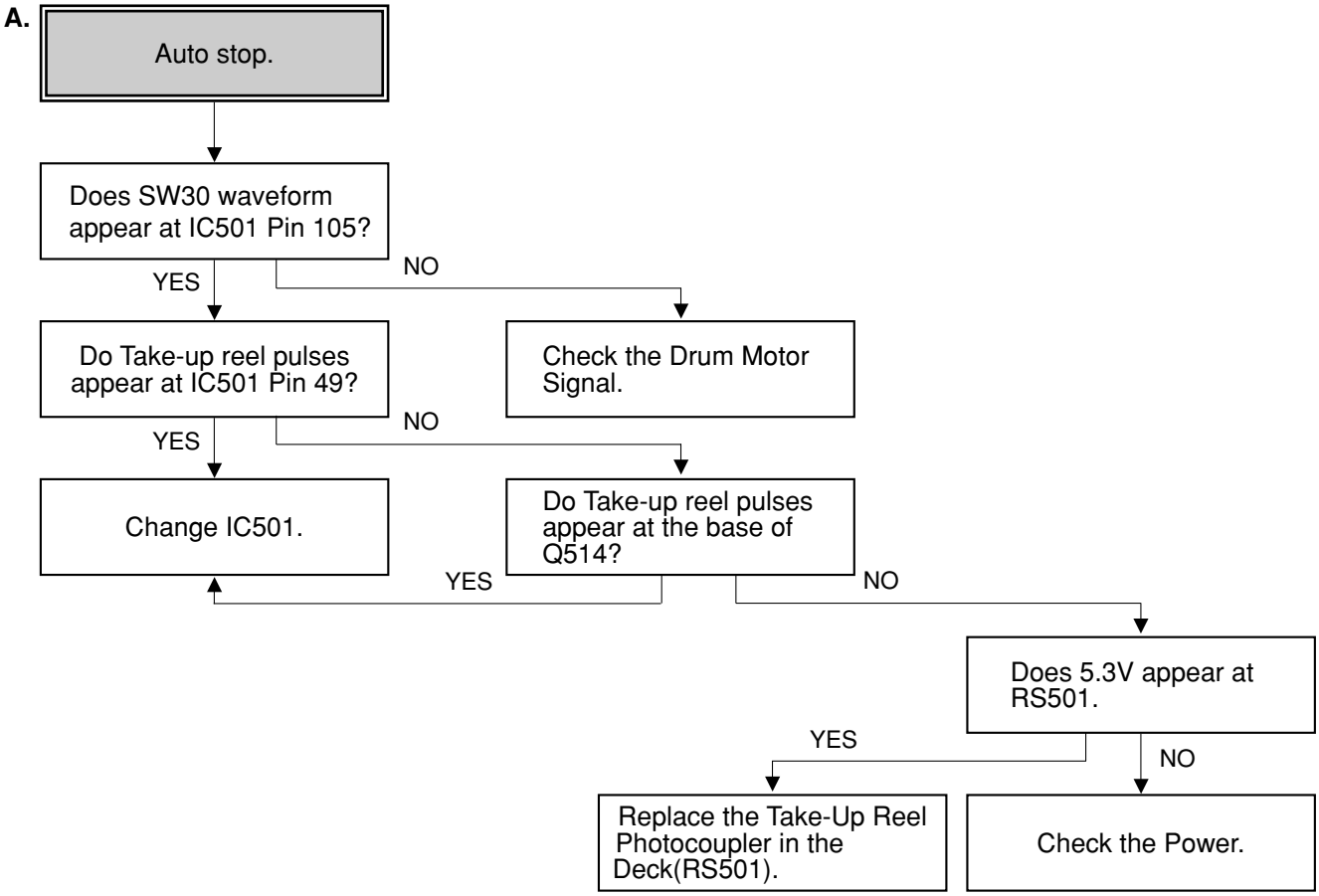
C.



(2) When the Y(Luminance) signal doesn't appear on the screen in PB Mode,

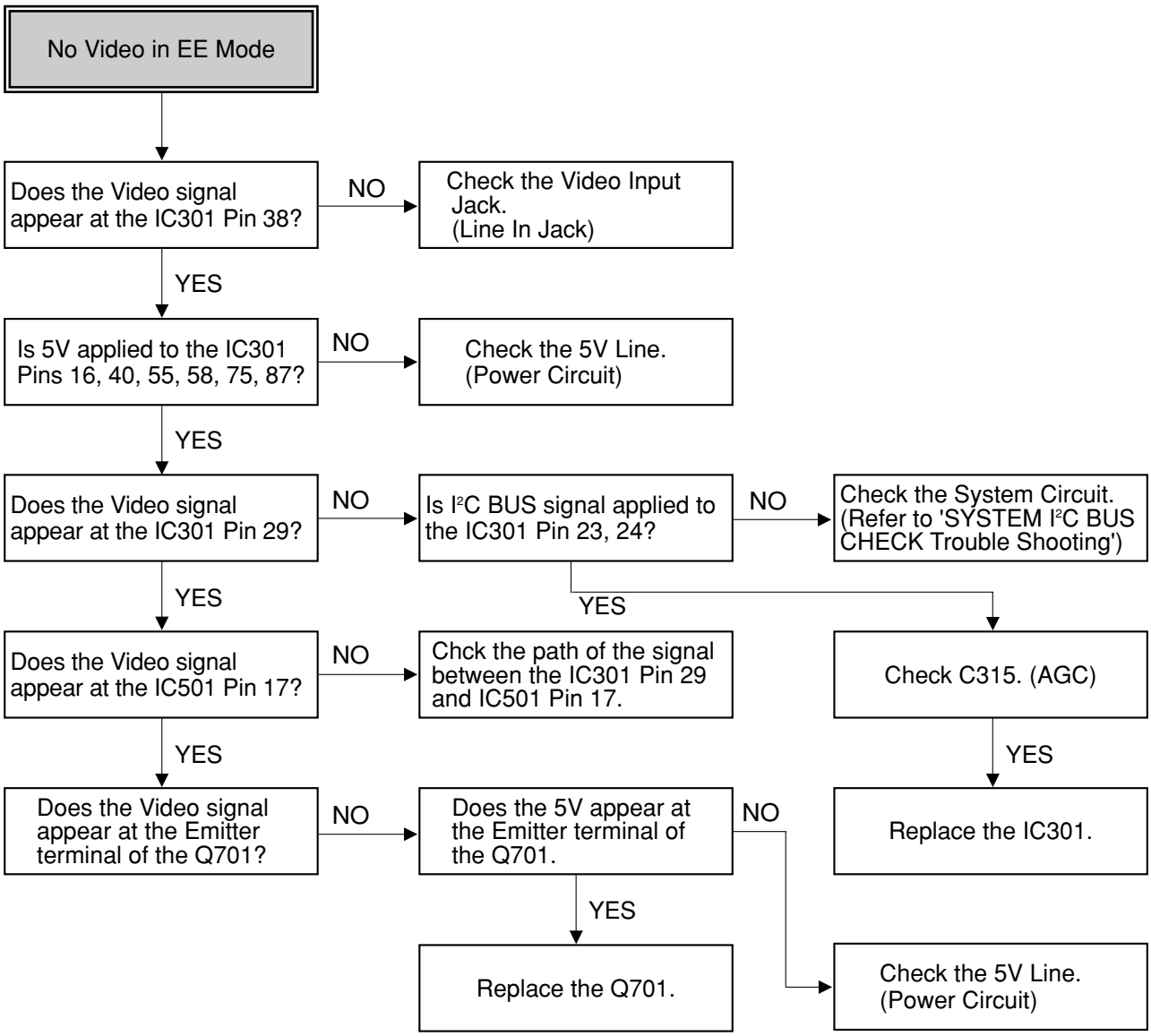


3. System & Front Panel Circuit

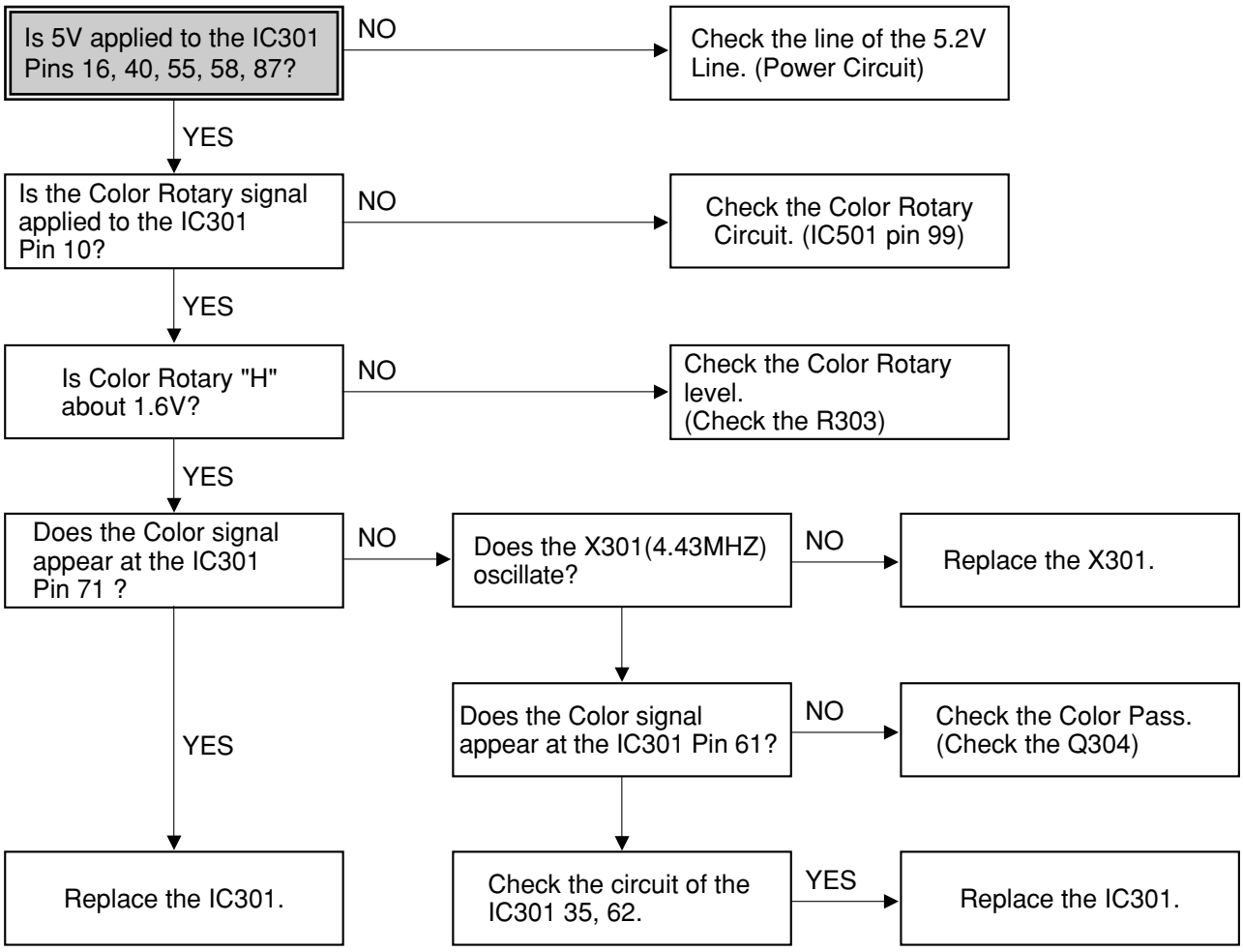


4. Y/C CIRCUIT

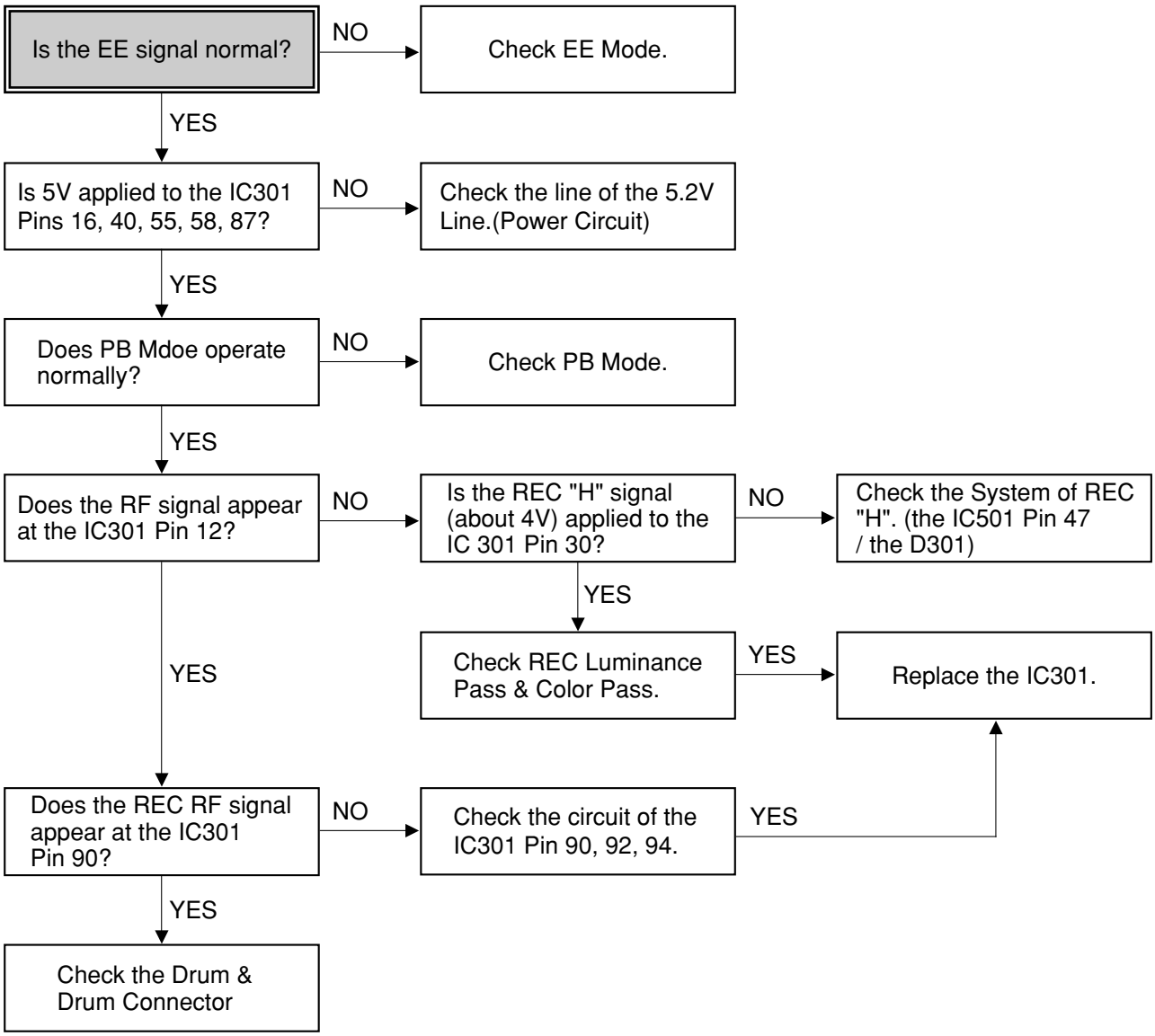
(1) No Video in EE Mode,



(3) When the C(Color) signal doesn't appear on the screen in PB Mode,

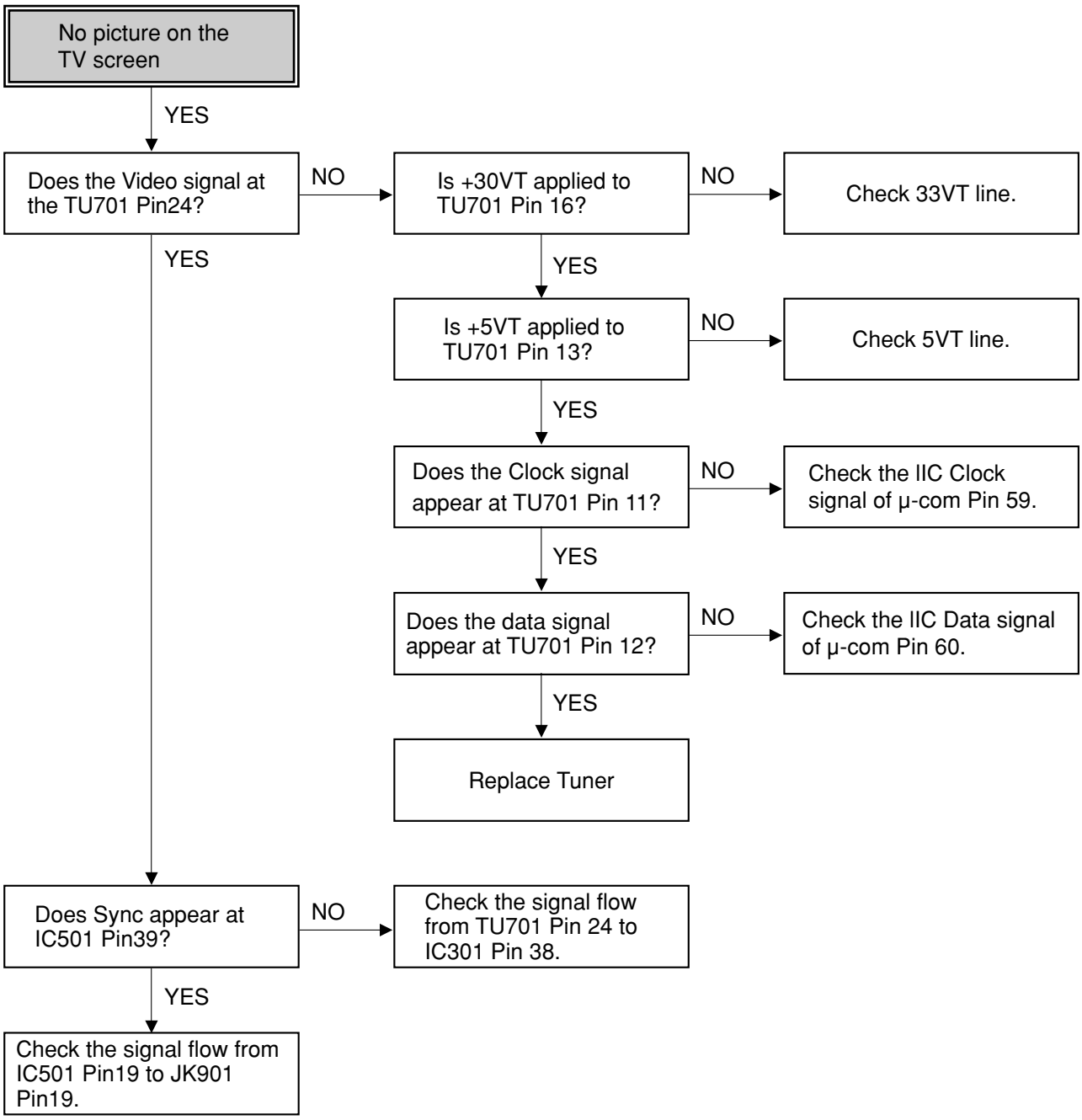


(4) When the Video signal doesn't appear on the screen in REC Mode,

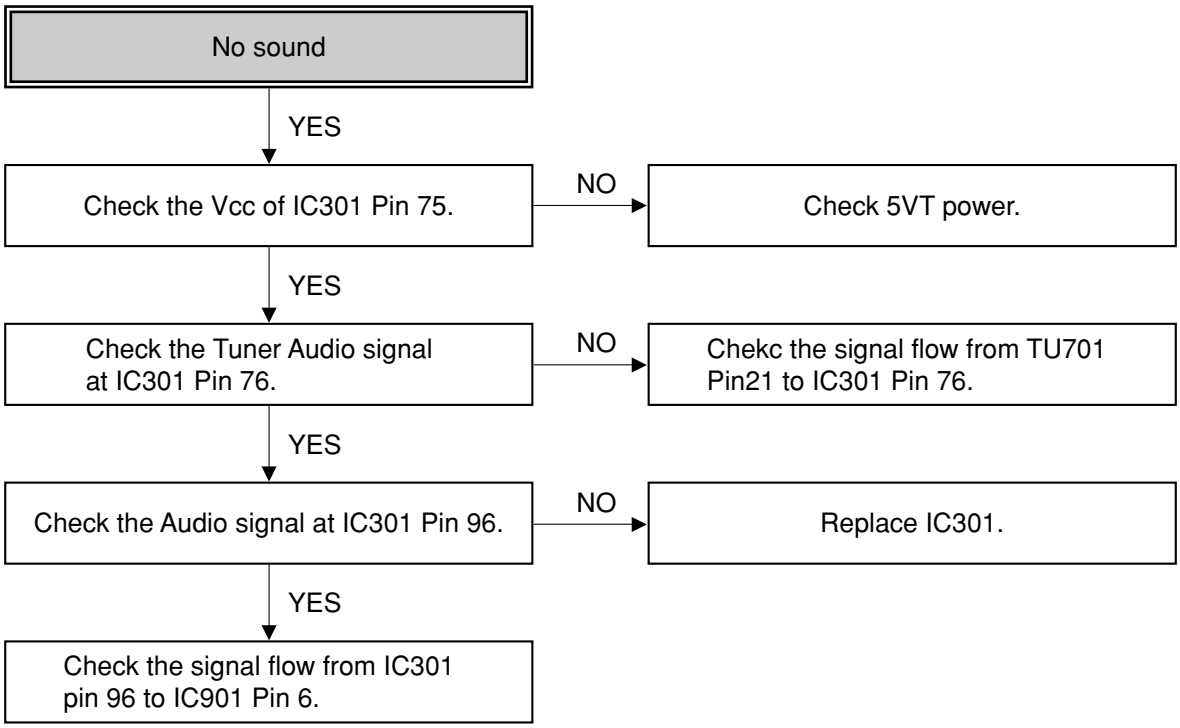


5. Tuner/IF circuit

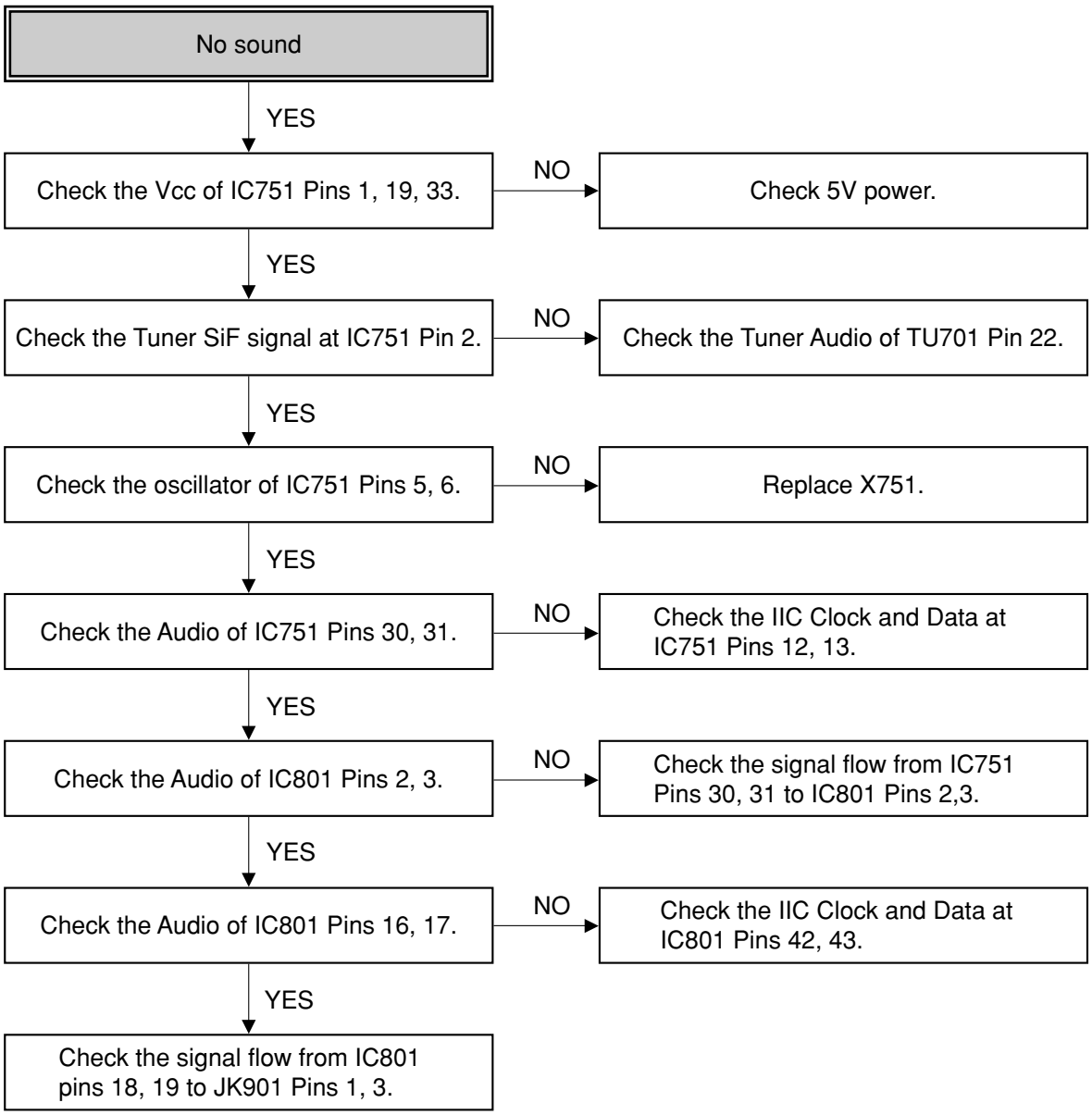
(1) No picture on the TV screen



(2) No sound (Mono Model Only)

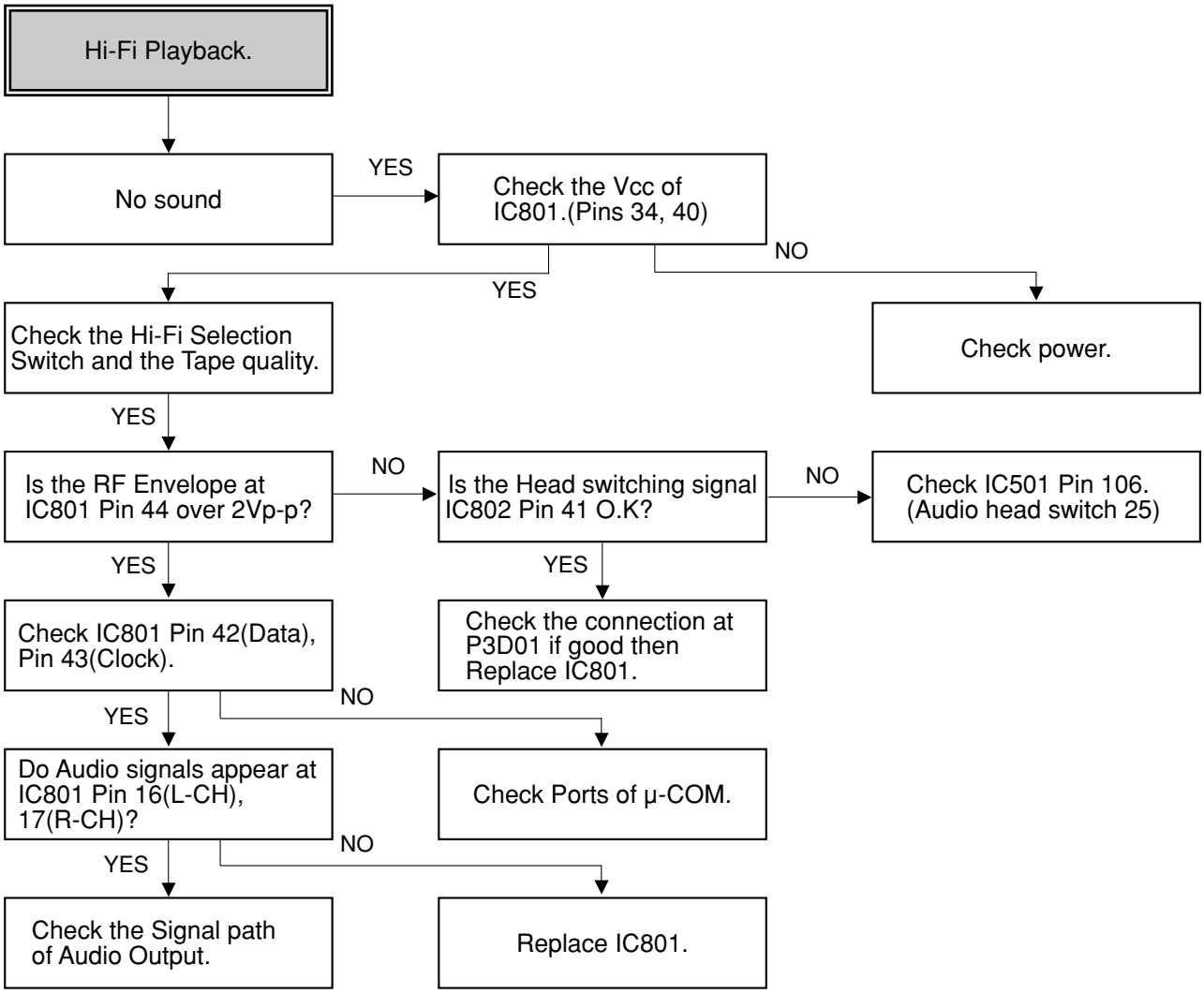


(3) No sound (Hi-Fi Model Only)

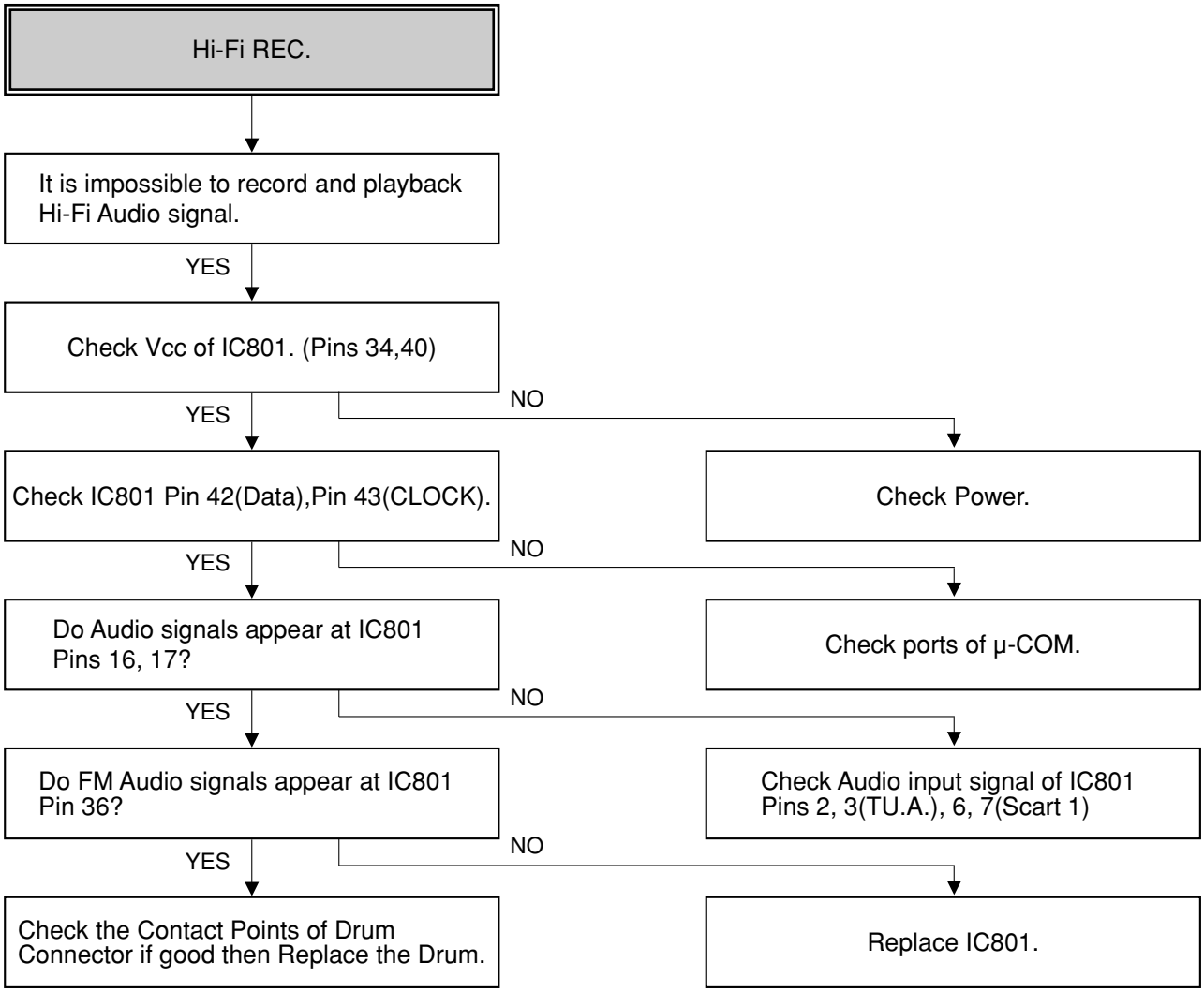


6. Hi-Fi Circuit (Hi-Fi Model Only)

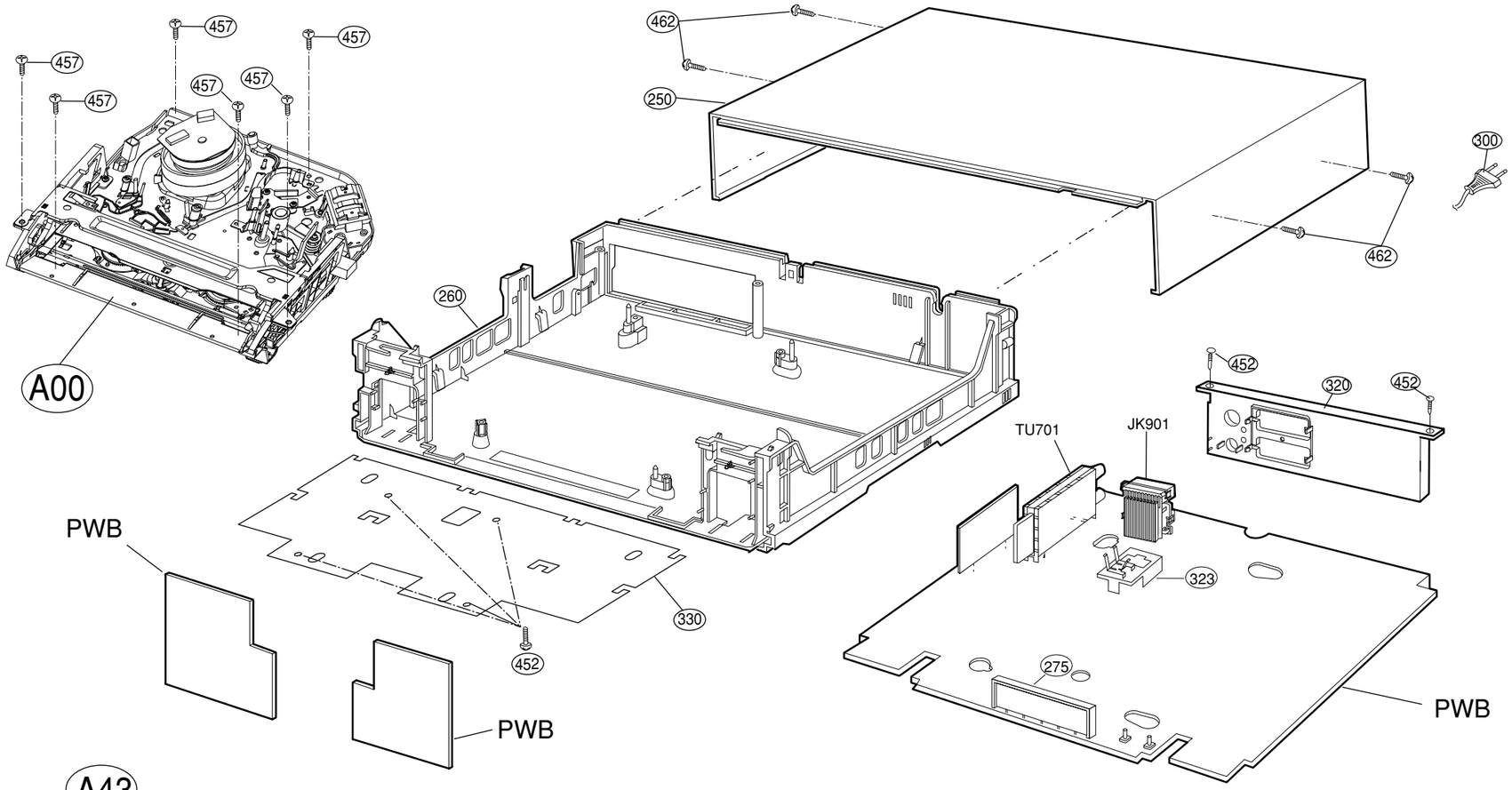
A.

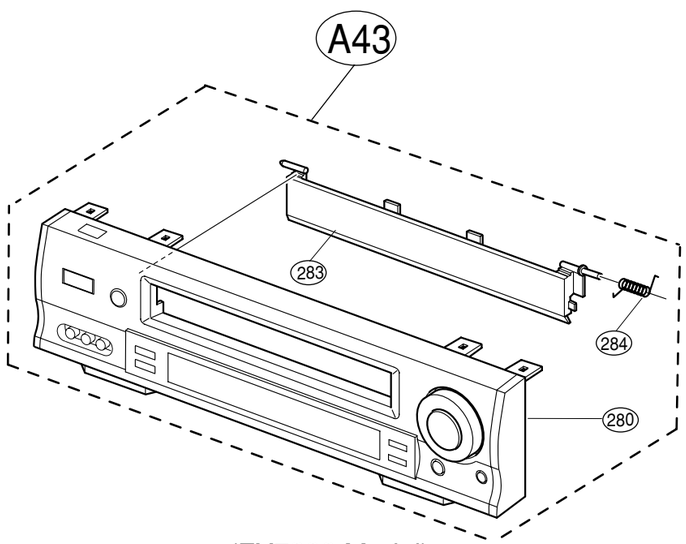


B.

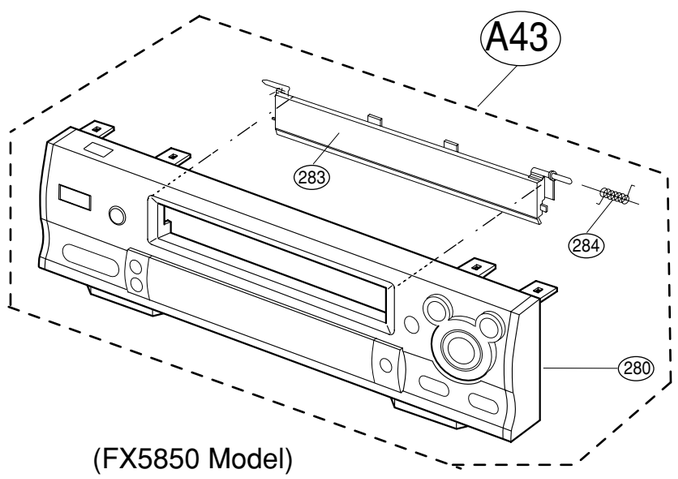

Hi-Fi REC.
It is impossible to record and playback Hi-Fi Audio signal.
YES
Check Vcc of IC801. (Pins 34,40)
NO
YES
Check Power.
Check IC801 Pin 42(Data),Pin 43(CLOCK).
NO
YES
Check ports of µ-COM.
Do Audio signals appear at IC801 Pins 16, 17?
NO
YES
Check Audio input signal of IC801 Pins 2, 3(TU.A.), 6, 7(Scart 1)
Do FM Audio signals appear at IC801 Pin 36?
NO
YES
Replace IC801.
Check the Contact Points of Drum Connector if good then Replace the Drum.

MECHANICAL EXPLODED VIEW -1/1

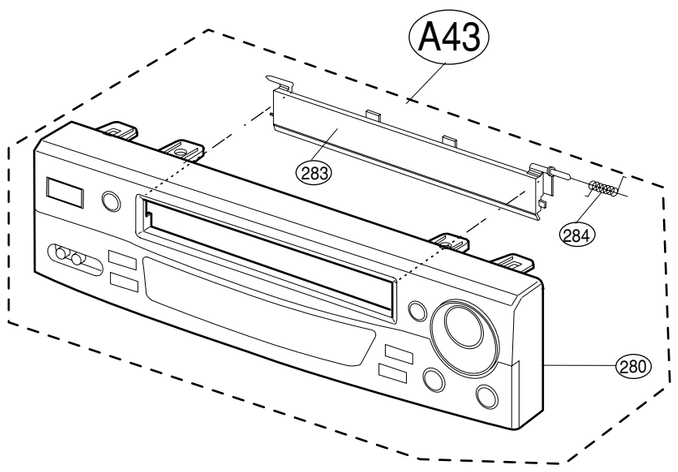




(FX7800 Model)



(FX5850 Model)



(FX4200,GX1400,GX1100 Models)

MECHANICAL MAIN PARTS LIST 1/1

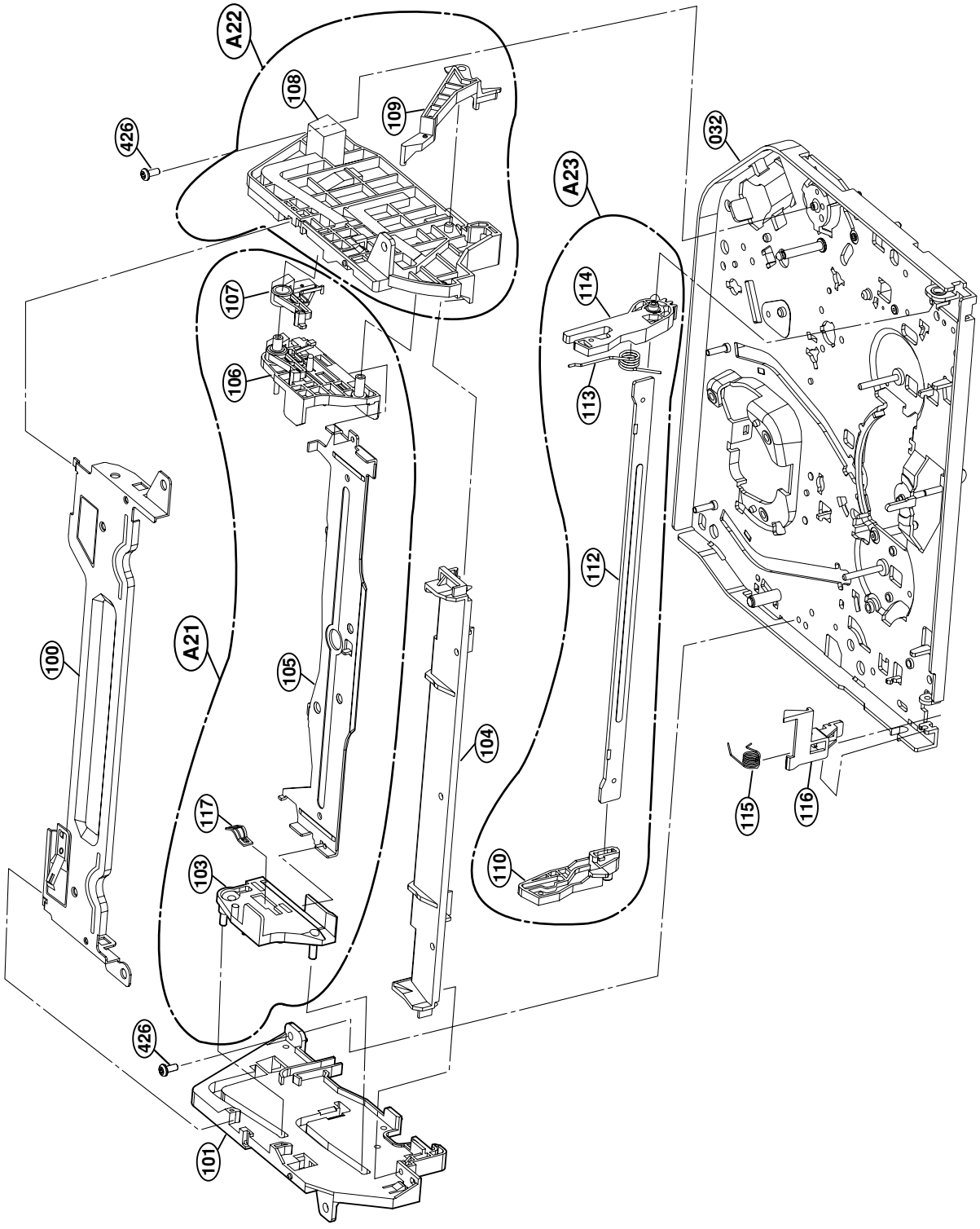
REF. NO	PART NO.	KANRI NO.	DESCRIPTION
250	S1-10R-012-8U0		CASE,TOP
260	———		FRAME,MAIN
275	S9-30R-010-2A0		HOLDER LED
280	———		PANEL,FRONT(929NS:FX7800LE)<78>
280	———		PANEL,FRONT(911NS:FX5850LE)<58>
280	———		PANEL,FRONT FRONT(CCA201S)<11>
280	———		PANEL,FRONT FRONT(CCA204S)<14>
280	———		PANEL,FRONT FRONT(CCA404S)<42>
283	S5-80R-V00-6T0		DOOR CST (CFA929NS)<78>
283	S5-80R-V00-6Q0		DOOR CST (CFA929TP)<58>
283	S5-80R-V00-6H0		DOOR CST (CCA201S)<11>
283	S5-80R-V00-6M0		DOOR CST (CCA204S)<14>
283	S5-80R-V00-6P0		DOOR CST (CCA404S)<42>
284	S4-426-81A-000		SPR,DOOR
⚠ 300	S4-10R-CHD-01A		POWER CORD
320	S7-20R-D02-0C0		PANEL DISTRIBUTOR(PAL-2SCART<78,58>
320	S7-20R-D02-0B0		PANEL DISTRIBUTOR(PAL-SCART<11,14,42>
323	S1-11R-008-9B0		CASE ASSY
330	S5-50R-021-0A0		COVER BOTTOM
452	S3-530-51A-000		SCREW,SPECIAL
457	87-741-097-410		SCREW,3-12
462	S3-531-36A-000		SCREW,SPECIAL(FBK)
A00	———		DECK ASSY,VIDEO D33Y1 (4HF_21,<78,58>
A00	———		DECK ASSY,VIDEO D33Y1 DI(2HD,<11,14>
A00	———		DECK ASSY,VIDEO D33Y1 (4HD_21,<42>
A43	S7-21R-F14-1H0		PANEL ASSY FRONT(929NS:FX7800L<78>
A43	S7-21R-F13-5X0		PANEL ASSY,FRONT (911NS:FX5850<58>
A43	S7-21R-F20-1B0		PANEL ASSY,FRONT FRONT(CCA201S<11>
A43	S7-21R-F20-1F0		PANEL ASSY,FRONT FRONT(CCA204S<14>
A43	S7-21R-F20-1H0		PANEL ASSY,FRONT FRONT(CCA404S<42>

TYPE	MODEL NAME	SUFFIX
<78>	HV-FX7800	LE
<58>	HV-FX5850	LE
<42>	HV-FX4200	LE
<14>	HV-GX1400	LE
<11>	HV-GX1100	LE

COLOR NAME TABLE

Basic color symbol	Color	Basic color symbol	Color	Basic color symbol	Color
B	Black	C	Cream	D	Orange
G	Green	H	Gray	L	Blue
LT	Transparent Blue	N	Gold	P	Pink
R	Red	S	Silver	ST	Titan Silver
T	Brown	V	Violet	W	White
WT	Transparent White	Y	Yellow	YT	Transparent Yellow
LM	Metallic Blue	LL	Light Blue	GT	Transparent Green
LD	Dark Blue	DT	Transparent Orange	GM	Metallic Green
YM	Metallic Yellow	DM	Metallic Orange	PT	Transparent Pink
LA	Aqua Blue	GL	Light Green		

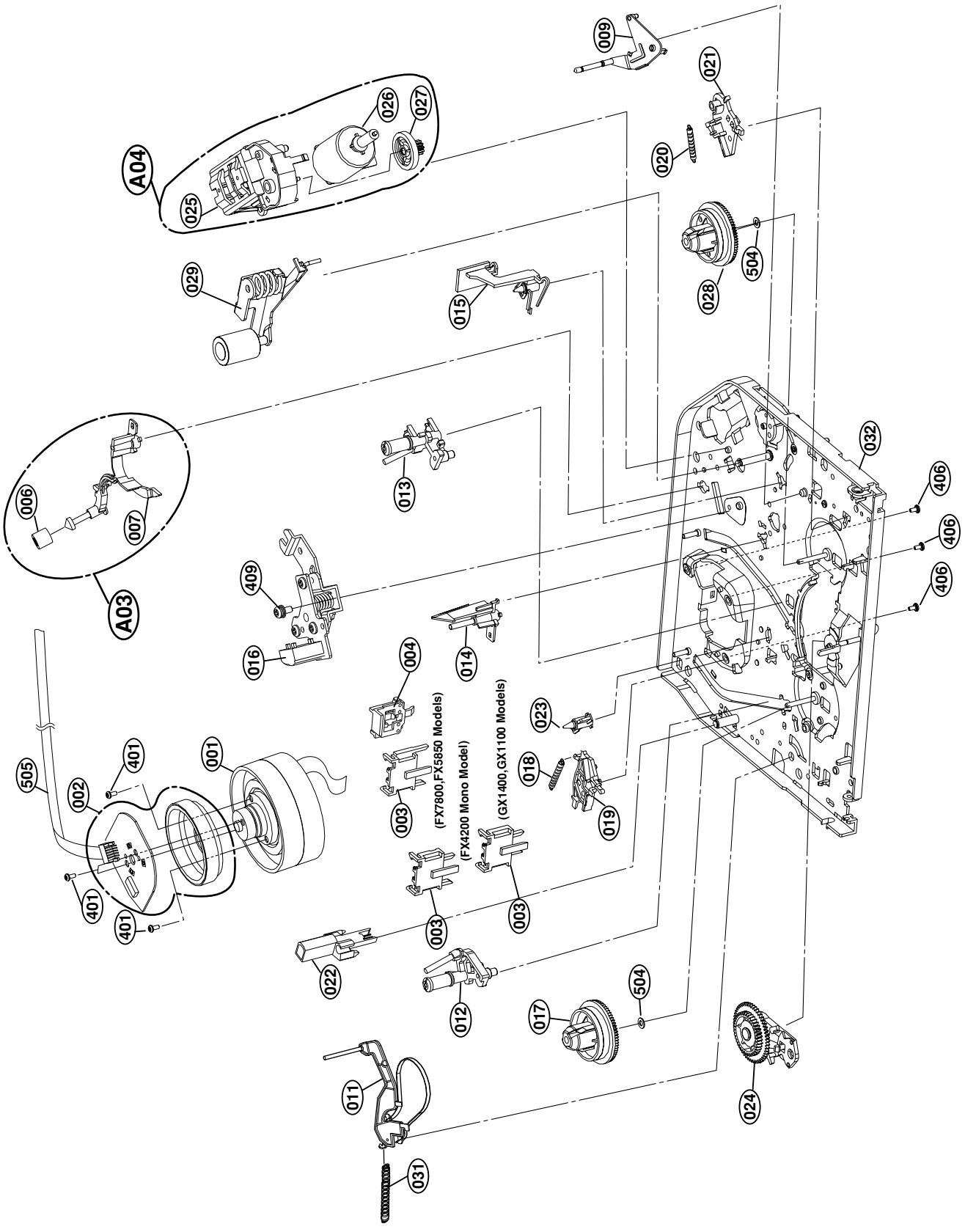
MECHANISM EXPLODED VIEW -1/3



MECHANISM MAIN PARTS LIST -1/3

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
032	S1-41R-000-2C0		CHASSIS ASSY D33Y
100	S3-01R-003-2A0		PLATE ASSY TOP
101	S8-10R-006-8A0		BRACKET SIDE(L)
103	———		HOLDER SIDE(L)
104	S9-74R-001-9A0		GUIDE CST
105	———		HOLDER CST
106	———		HOLDER SIDE(R)
107	———		LEVER STOPPER(R)
108	———		BRACKET SIDE(R)
109	———		OPENER DOOR
110	———		ARM,F/L (L)
112	———		BODY F/L
113	S9-70R-005-6A0		SPRING F/L(R)
114	———		ARM F/L(R)
115	S9-70R-005-0A0		SPRING SWITCH
116	S5-10R-002-0A0		LEVER SWITCH
117	———		SPR,PLATE
426	87-261-094-410		PAN HEAD SCREW 3-6
A21	S9-31R-003-1A0		HOLDER ASSY
A22	S8-11R-001-8A0		BRACKET ASSY DOOR
A23	S2-61R-001-6A0		ARM ASSY F/L

MECHANISM EXPLODED VIEW -2/3

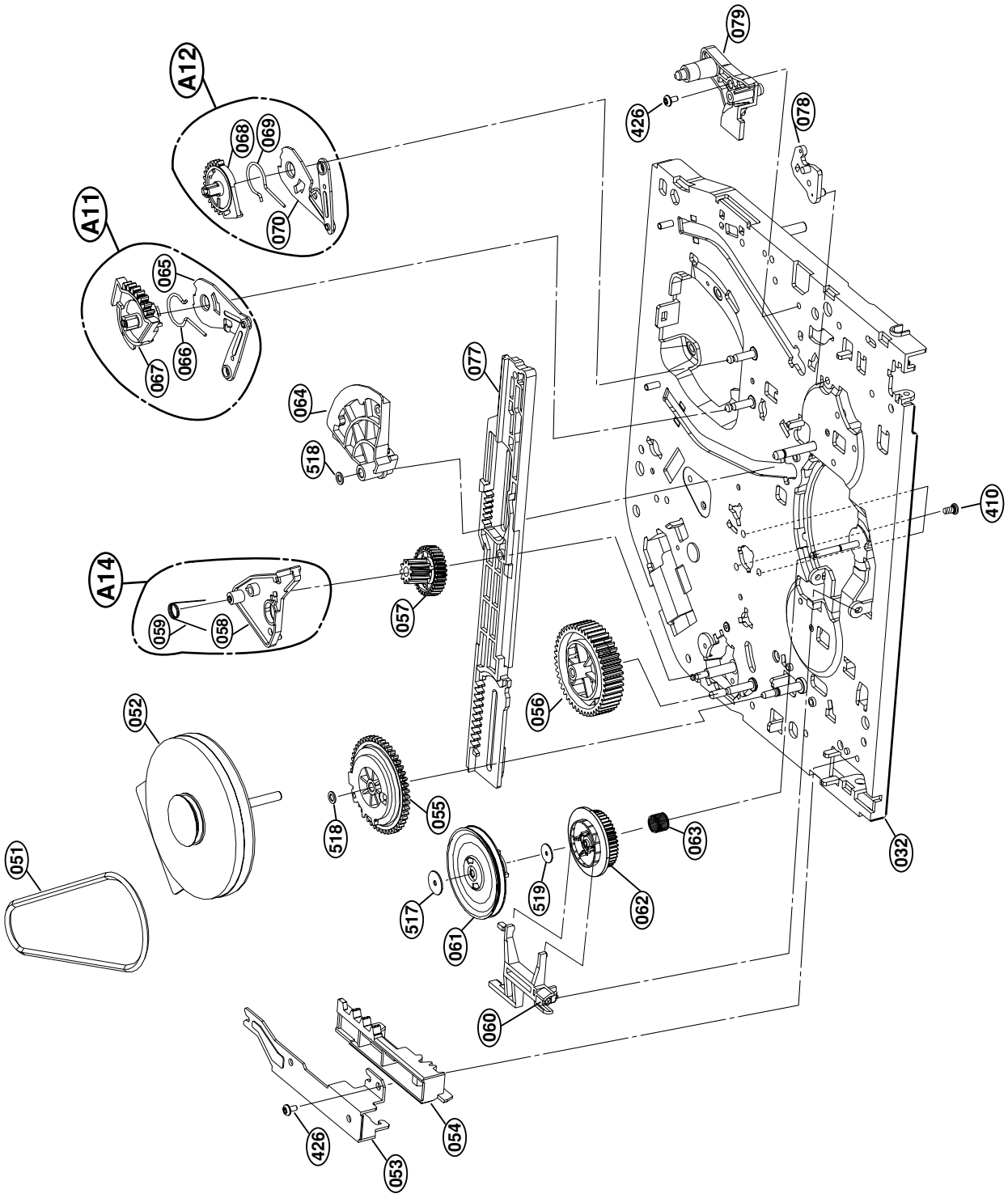


MECHANISM MAIN PARTS LIST -2/3

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
001	S7-23R-D20-6C0		DRUM UPPER ASSY PAL<78,58>
001	S7-23R-D10-4A0		DRUM(CIRC) ASSY SUB D33-2CH SP<11,14>
001	S7-23R-D10-5E0		DRUM(CIRC) ASSY SUB D33-4CH PA<42>
002	S6-80R-B00-2A0		MOTOR(MECH) DRUM GVD-D33Y
003	S9-30R-010-8A0		HOLDER FPC(6CH)<78,58>
003	S9-30R-010-6A0		HOLDER FPC(2CH)<11,14>
003	S9-30R-010-7A0		HOLDER FPC(4CH)<42>
004	S0-06R-002-0A0		CAP,FPC
006	———		ROLLER CLEANER
007	———		ARM CLEANER
009	S2-61R-001-7A0		ARM ASSY T/UP(D-33K)
011	S2-61R-001-8A0		ARM ASSY TENSION (D-33K)
012	S0-41R-000-3A0		BASE ASSY P2
013	S0-41R-000-4A0		BASE ASSY P3
014	S0-41R-000-7A0		BASE ASSY P4
015	S8-70R-000-3A0		OPENER LID
016	S0-41R-000-5B0		BASE ASSY A/C HEAD
017	S4-08R-000-1B0		REEL S
018	S9-70R-005-4A0		SPRING SB
019	S4-21R-000-3A0		BRAKE ASSY S
020	S9-70R-005-3A0		SPRING TB
021	S4-21R-000-4A0		BRAKE ASSY T
022	S5-238-33B-000		HEAD FE D33
023	S9-80R-001-0A0		SUPPORTER CST
024	S2-61R-001-3A0		ARM ASSY IDLER
025	———		BRACKET L/D MOTOR
026	———		MOTOR ASSY L/D
027	S4-70R-002-5A0		GEAR WHEEL
028	S4-08R-000-2B0		REEL T
029	S2-61R-001-1A0		ARM ASSY PINCH
031	S9-70R-006-9A0		SPRING TENSION
032	S1-41R-000-2C0		CHASSIS ASSY D33Y
401	SM-PC0-261-418		SCREW,2.6-4.0
406	87-261-094-410		PAN HEAD SCREW 3-6
409	87-741-095-410		SCREW,PAN HEAD 3.0-8.0
504	S3-540-01B-000		WASHER,P.S 3.1-6-0.5
505	S8-50R-HE2-2Z0		CABLE,FLEXIBLE 220M/M
A03	S2-61R-001-5A0		CLEANER ARM ASSY
A04	S8-11R-001-9A0		BRACKET ASSY L/D MOTOR

TYPE	MODEL NAME	SUFFIX
<78>	HV-FX7800	LE
<58>	HV-FX5850	LE
<42>	HV-FX4200	LE
<14>	HV-GX1400	LE
<11>	HV-GX1100	LE

MECHANISM EXPLODED VIEW -3/3

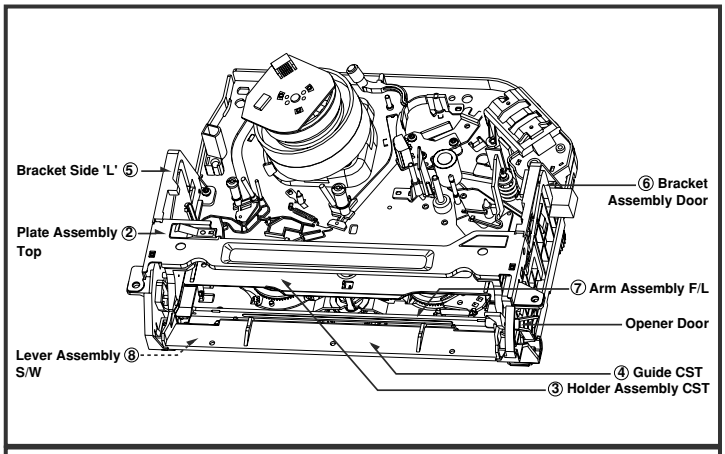


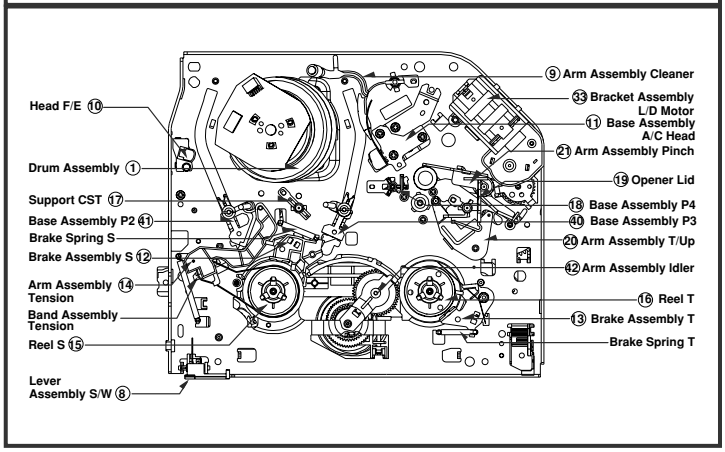
MECHANISM MAIN PARTS LIST -3/3

REF. NO	PART NO.	KANRI NO.	DESCRIPTION
032	S1-41R-000-2C0		CHASSIS ASSY D33Y
051	S4-00R-000-5A0		BELT CAPSTAN
052	S6-80R-A00-1A0		MOTOR(MECH) CAPSTAN F2QSB53
053	S9-74R-001-8A0		GUIDE RACK F/L
054	S4-70R-003-7A0		GEAR RACK F/L
055	S4-70R-003-3A0		GEAR DRIVE
056	S4-70R-003-2B0		GEAR,CAM
057	S4-70R-003-6B0		GEAR CONNECT
058	———		BRAKE CAPSTAN
059	S9-70R-005-9A0		SPRING CAPSTAN
060	S5-10R-002-5B0		F/R LEVER
061	S2-65R-000-3A0		CLUTCH ASSY D33K
062	S4-70R-005-8A0		GEAR,UP/D33K
063	S9-70R-005-1A0		SPRING UP/D
064	S4-70R-003-4A0		GEAR SECTOR
065	———		LEVER P3
066	S9-70R-004-6A0		SPRING L/D
067	———		GEAR P3
068	———		GEAR P2
069	S9-70R-004-6A0		SPRING L/D
070	———		LEVER P2
077	S3-00R-015-7A0		PLATE SLIDER
078	S5-10R-002-2A0		LEVER TENSION
079	S0-40R-002-1A0		BASE,TENSION(D-33K)
410	SA-PF0-262-218		SCREW,PAN HEAD 2.6-6.8
426	87-261-094-410		PAN HEAD SCREW 3-6
517	SW-ZZR-000-4B0		WASHER STOPPER
518	SW-ZZR-000-4A0		WASHER STOPPER
519	SW-ZZR-000-4D0		WASHER STOPPER
A11	S4-70R-002-8A0		GEAR ASSY P3
A12	S4-70R-002-6A0		GEAR ASSY P2
A14	S4-21R-000-5C0		CAPSTAN BRAKE ASSY

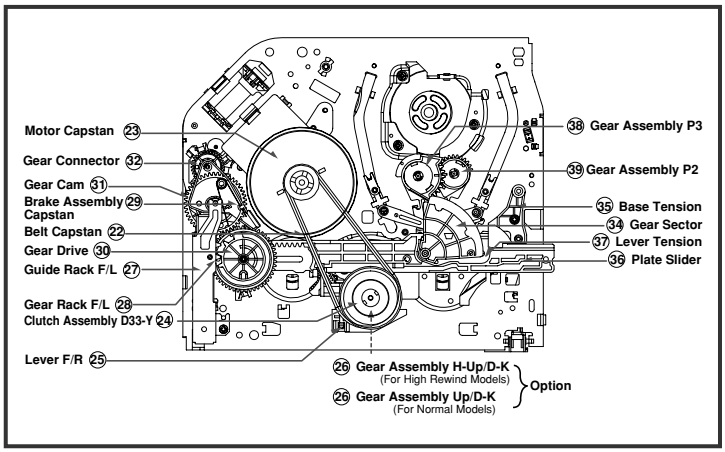
DECK MECHANISM PARTS LOCATIONS

• Top View





• Bottom View



NOTE : When reassembly perform the procedure in the reverse order.

1) When reassembling, confirm Mechanism and Mode Switch Alignment Position (Pefer to Page 93)
2) When disassembling, the Parts for Starting No. Should be removed first.

Procedure / Starting No.		Part	Fixing Type	Figure
	1	Drum Assembly	3 Screws , Cap FPC	A-1
	2	Plate Assembly Top	Two Hooks	A-2
2	3	Holder Assembly CST	Chassis Hole	A-2
	4	Guide CST	2 Hooks	A-2
2,3,4	5	Bracket Side (L)	1 Screw	A-2
2,3,4	6	Bracket Assembly Door	1 Screw	A-2
2,3,4,5,6	7	Arm Assembly F/L	Chassis Hole	A-2
2,3,4,5	8	Lever Assembly S/W	Chassis Hole	A-2
	9	Arm Assembly Cleaner	Chassis Embossing	A-3
	10	Head F/E	2 Hooks	A-3
	11	Base Assembly A/C Head	1 Screw	A-3
	12	Brake Assembly S	Chassis Hole	A-4
2,3	13	Brake Assembly T	Chassis Hole	A-4
2,3,12,	14	Arm Assembly Tension	Chassis Hole	A-4
2,3,12,14	15	Reel S	Chassis Shaft	A-4
2,3,13	16	Reel T	Chassis Shaft	A-4
	17	Support CST	Chassis Embossing	A-5
	18	Base Assembly P4	Chassis Embossing	A-5
	19	Opener Lid	Chassis Embossing	A-5
19	20	Arm Assembly T/Up	Chassis Embossing	A-5
19	21	Arm Assembly Pinch	Chassis Shaft	A-5

Procedure / Starting No.		Part	Fixing Type	Figure
	22	Belt Capstan		A-6
22	23	Motor Capstan	3 Screws	A-6
	24	Clutch Assembly D33-K	1 Washer	A-6
22,24	25	Lever F/R	1 Hook	A-6
22,24	26	Gear H-Up/D-K	2 Washers	A-6
	27	Guide Rack F/L	1Screw	A-7
27	28	Gear Rack F/L		A-7
27, 28	29	Brake Assembly Capstan	Chassis Shaft	A-7
27, 28	30	Gear Drive	1 Washer	A-8
27, 28, 29	31	Gear Cam	Chassis Shaft	A-8
27, 28, 29, 30	32	Gear Connector	Chassis Shaft	A-8
	33	Bracket Assembly L/D Motor	3 Hooks	A-8
	34	Gear Sector	3 Washers	A-9
	35	BaseTension	1 Screw	A-9
22, 24, 25, 27, 28, 30, 34, 35	36	Plate Slider	Chassis Shaft	A-9
22, 24, 25, 27, 28, 30, 34, 35	37	Lever Tension	Chassis Hole	A-9
34 A-10	38	Gear Assembly P3	2 Hooks	
34, 38	39	Gear Assembly P2	2 Hooks	A-10
34, 38, 39	40	Base Assembly P3	Chassis Hole	A-10
34, 38, 39, 40	41	Base Assembly P2	Chassis Hole	A-10
1, 2	42	Arm Assembly Idler	1 Hook	A-10

DECK MECHANISM DISASSEMBLY

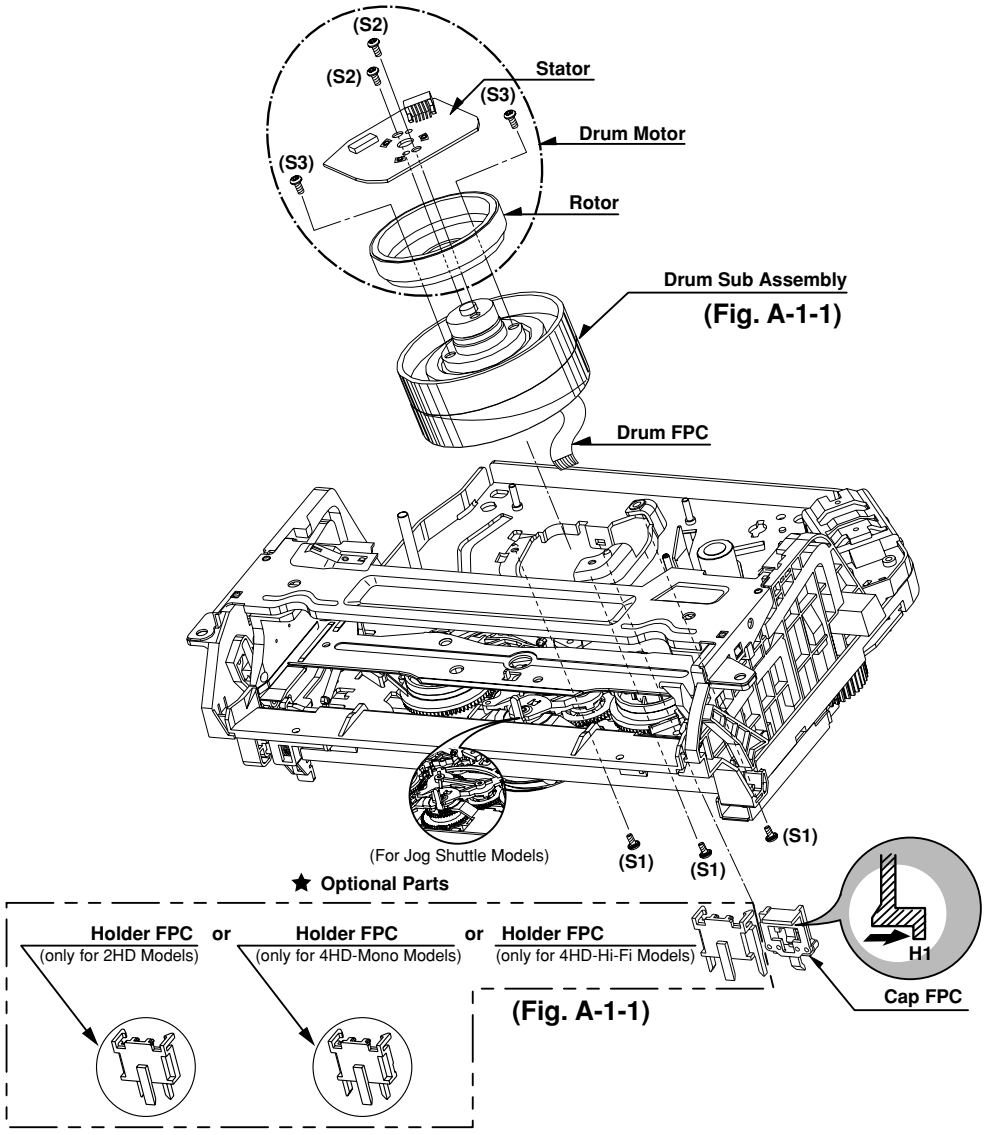


Fig. A-1

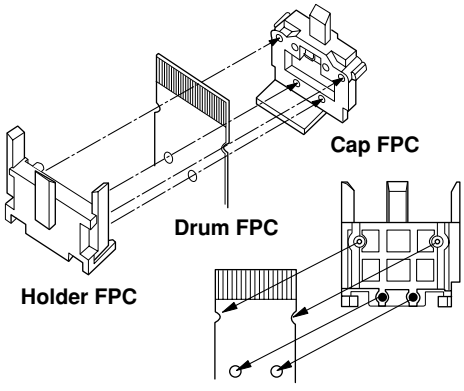
1. Drum Assembly (Fig. A-1-1)

1) Unhook the (H1) on the back side of the Chassis and separate the Cap FPC.
2) Remove three Screws (S1) and lift up the Drum Assembly.
3) Remove two Screws (S2) and Separate the Stator of Drum Motor.
4) Remove two Screws (S3) and Separate the Rotor of Drum Motor from the Drum Sub Assembly.

NOTE

(1) When reassembling Cap FPC, two Holes of Drum FPC are inserted to the two Bosses of Holder FPC correctly. (Refer to Fig. B-1)

(Fig. B-1)



DECK MECHANISM DISASSEMBLY

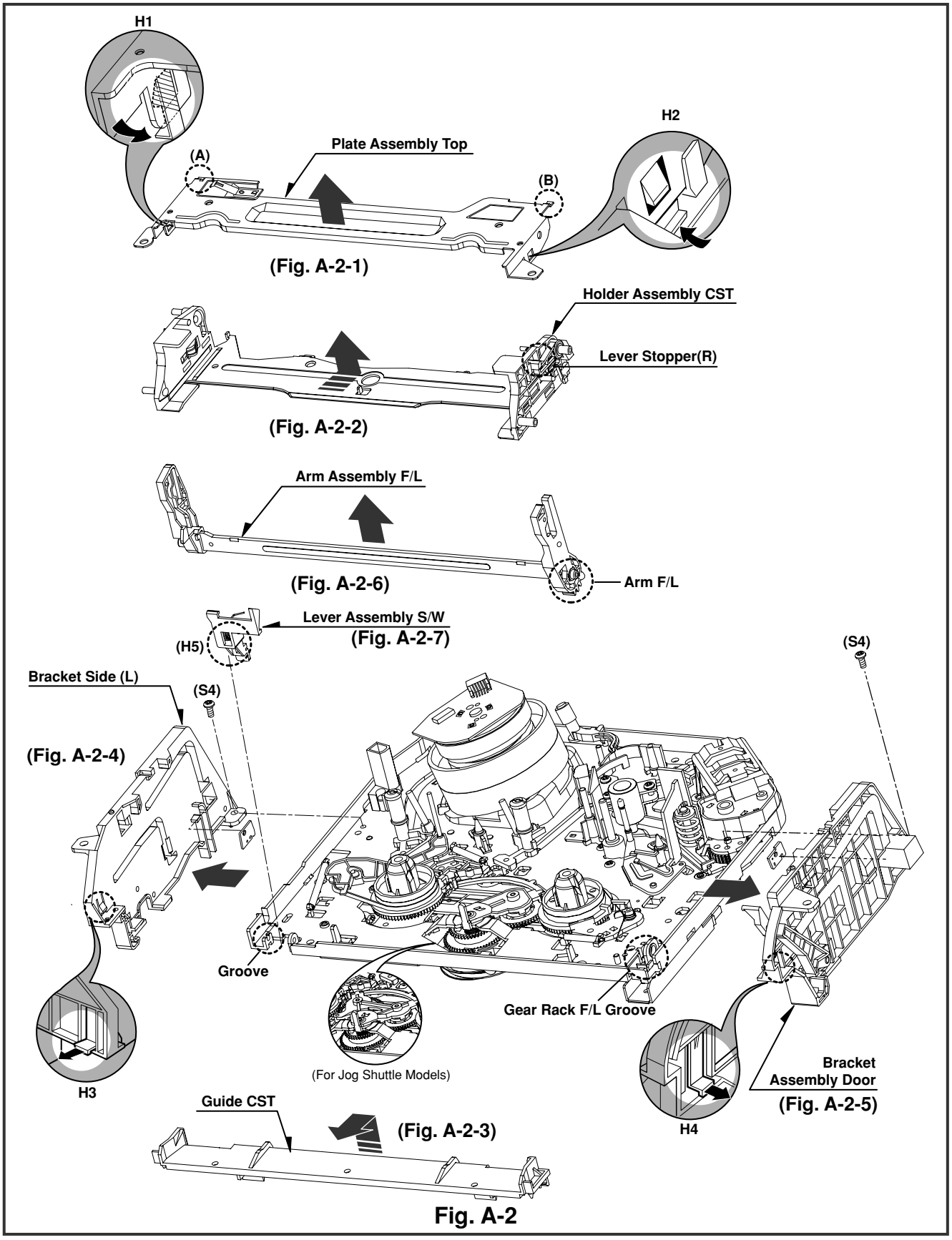


Fig. A-2

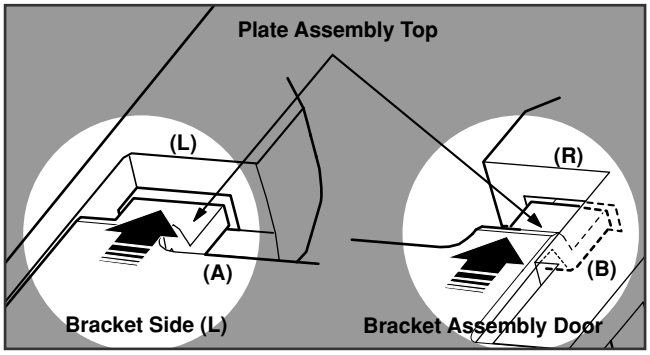
DECK MECHANISM DISASSEMBLY

2. Plate Assembly Top (Fig. A-2-1)

1) Unhook the (H1) and separate the Left Side.
2) Unhook the (H2) and lift up the Plate Assembly Top.

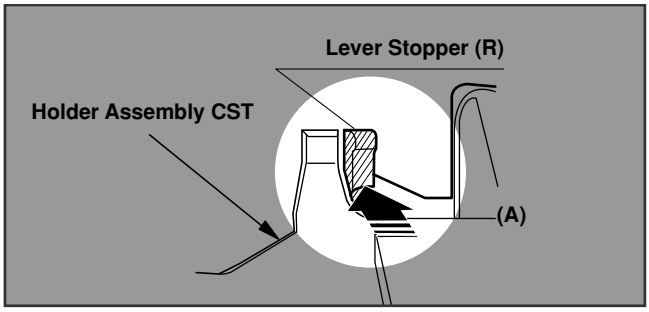
NOTE

(1) When reassembling, confirm (A),(B) Part of the Plate Assembly Top is inserted to the (L),(R) Grooves of the Bracket Side(L) and Bracket Assembly Door.

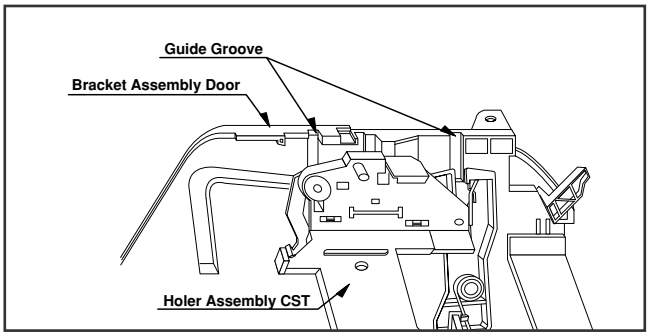


3. Holder Assembly CST (Fig.A-2-2)

1) Push the Lever Stopper (R) in the direction of the arrows (A) and move the Holder Assembly CST.

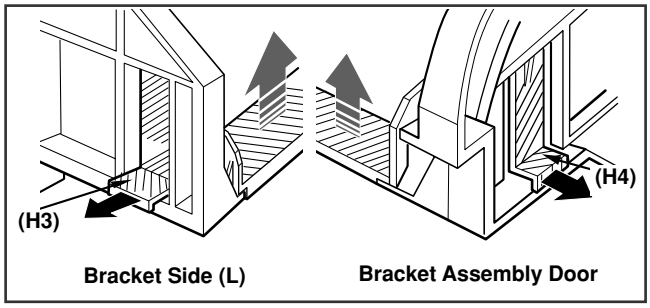


2) Push the Bracket Assembly Door to the right and lift up the Holder Assembly CST along the Guide Groove of the Bracket Assembly Door.



4. Guide CST (Fig.A-2-3)

1) Unhook(H3) in the direction of the arrow and separate the left side.
2) Unhook (H4) as above No.1) and disassemble the Guide CST in the direction of the arrow.



5. Bracket Side(L) (Fig. A-2-4)/ Bracket Assembly Door (Fig.A-2-5)

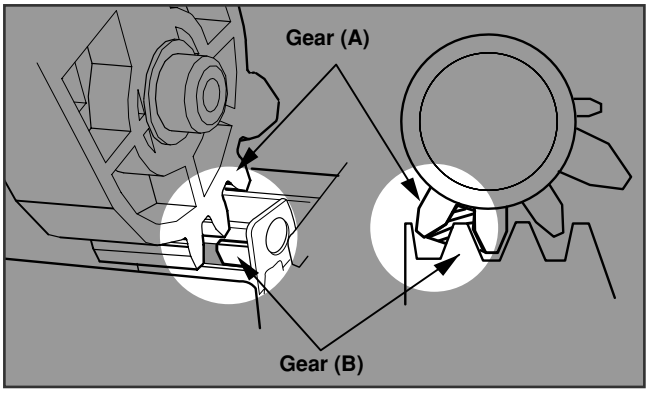
1) Remove the Screw (S4) and disassemble the Bracket Side(L) in the front.
2) Remove the Screw (S4) and disassemble the Bracket Assembly Door in the front.

6. Arm Assembly F/L (Fig. A-2-6)

1) Push the Arm Assembly F/L to the left and lift up it.

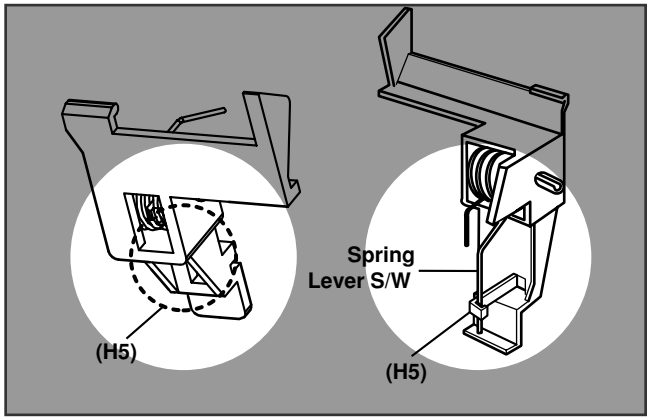
NOTE

(1) When reassembling, confirm that the Gear(A) of the Arm F/L and the Gear(B) of the Gear Rack F/L are assembled as below.



7. Lever Assembly S/W (Fig. A-2-7)

1) Hook the Spring Lever S/W on (H5).
2) Lift up the left side of the Lever S/W from the Groove(A) of the Chassis.



DECK MECHANISM DISASSEMBLY

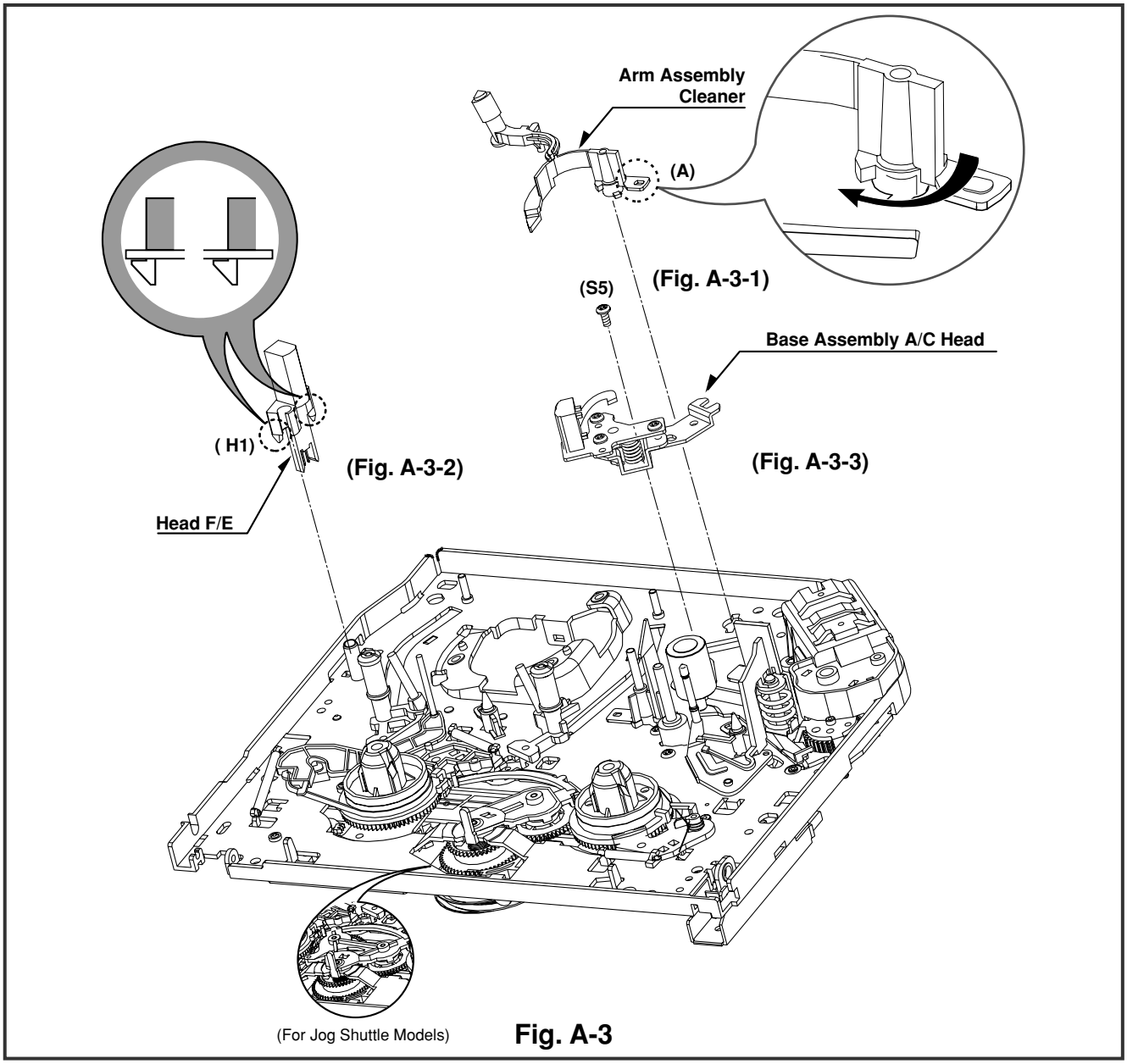
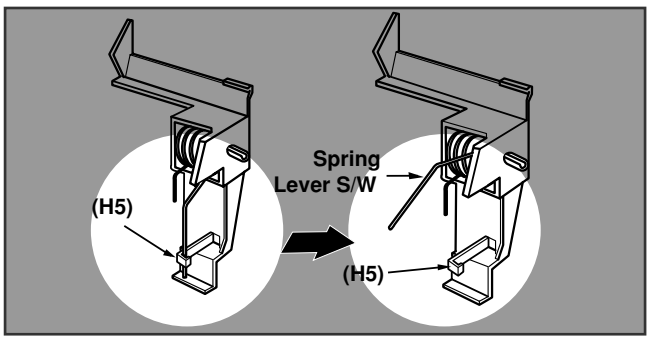


Fig. A-3

NOTE

(1) Place the Spring Lever S/W of the above (No.1) as original position.



8. Arm Assembly Cleaner(Fig. A-3-1)

1) Break away the (A) part shown above Fig. A-3-1 from the Embossing of the Chassis in the clockwise direction and lift up the Arm Assembly Cleaner.

9. Head F/E (Fig. A-3-2)

1) Unhook the two Hooks (H1) on the back side of the Chassis and lift up the Head F/E.

10. Base Assembly A/C Head (Fig. A-3-3)

1) Remove the Screw (S5) and lift up the Base Assembly A/C Head.

DECK MECHANISM DISASSEMBLY

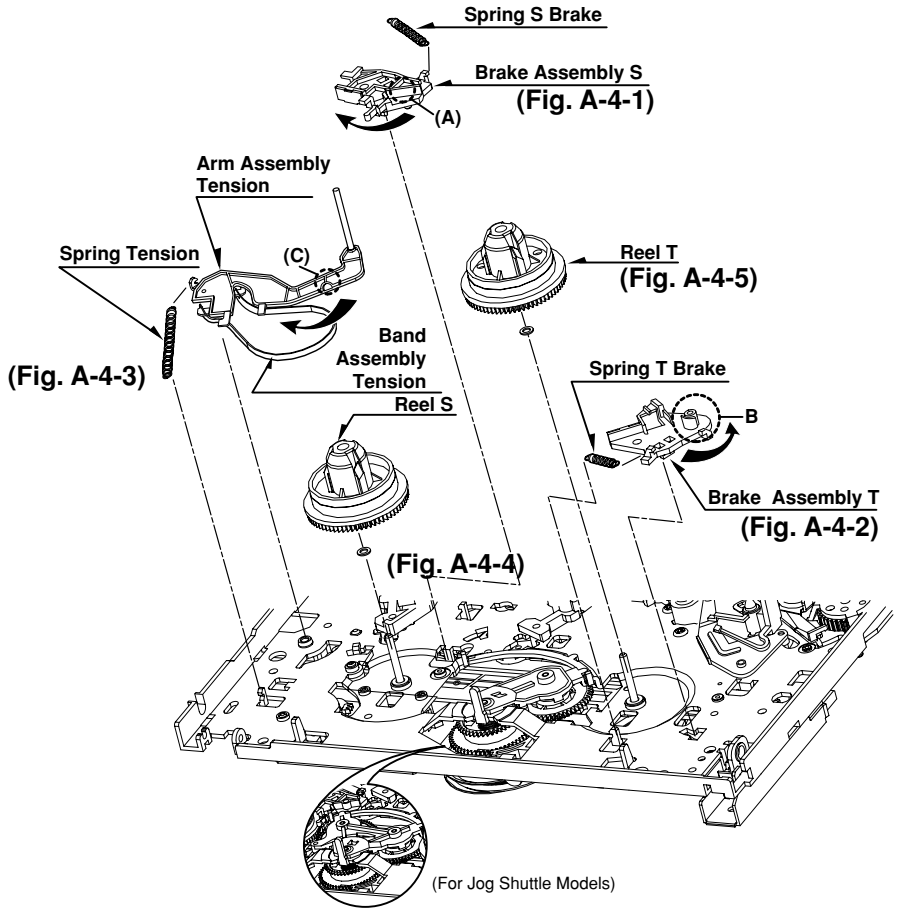


Fig. A-4

11. Brake Assembly S (Fig. A-4-1)

1) Remove the Spring S Brake.
2) Hold the (A) part shown above Fig. A-4-1 and turn to the clockwise direction, and then lift up the Brake Assembly S.

NOTE

(1) When reassembling, be careful not to change the Spring with below No.12.(Refer to Fig. B-2).

12. Brake Assembly T (Fig. A-4-2)

1) Remove the Spring T Brake.
2) Hold the (B) part shown above Fig. A-4-2 and turn to the counterclockwise direction, and then lift up the Brake Assembly T.

NOTE

(1) When reassembling, be careful not to change the Spring with above No.11.(Refer to Fig. B-2).

(Difference for Springs) **(Fig. B-2)**

	Spring T Brake Color (Black)
	Spring S Brake
	Spring Tension

13. Arm Assembly Tension (Fig. A-4-3)

1) Remove the Spring Tension.
2) Hold the (C) part shown above Fig. A-4-3 and turn to the clockwise direction, and then lift up the Arm Assembly Tension.

NOTE

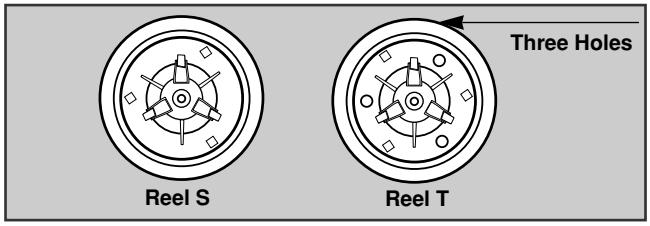
(1) When reassembling, be careful not to change the Spring with above No.11,12.(Refer to Fig. B-2).

14. Reel S (Fig. A-4-4) & Reel T (Fig. A-4-5)

NOTE

1) Lift up the Reel S and Reel T.

(1) When reassembling, be careful not to change the Reel S and Reel T each other.



(2) Confirm two Slide Washers under the Reel S and Reel T.

DECK MECHANISM DISASSEMBLY

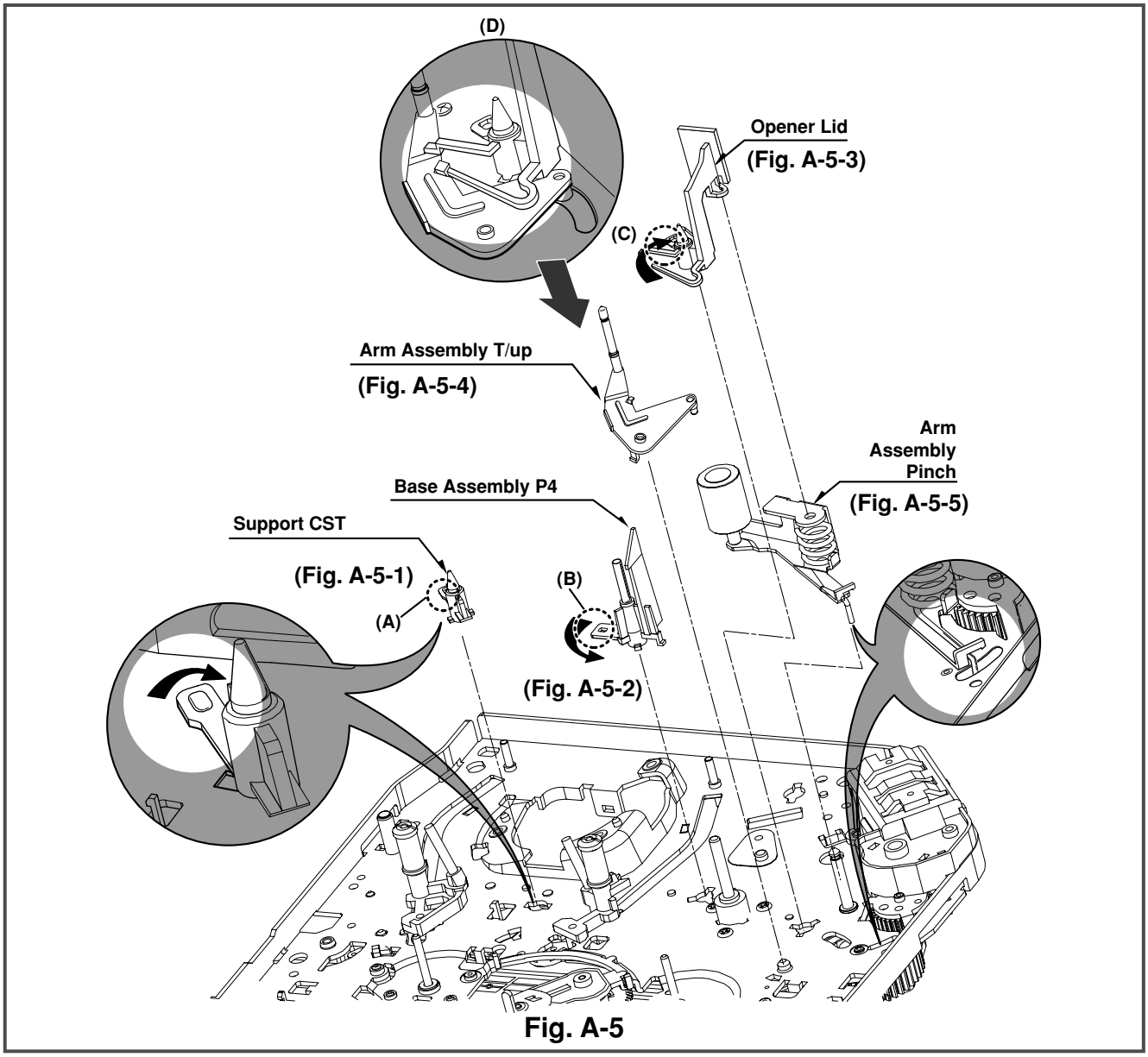


Fig. A-5

15. Support CST (Fig. A-5-1)

1) Break away the (A) part shown above Fig. A-5-1 from the Embossing of the Chassis in the clockwise direction, and lift up the Support CST.

16. Base Assembly P4 (Fig. A-5-2)

1) Break away the (B) part shown above Fig. A-5-2 from the Embossing of the Chassis in the counterclockwise direction and lift up the Base Assembly P4.

17. Opener Lid (Fig. A-5-3)

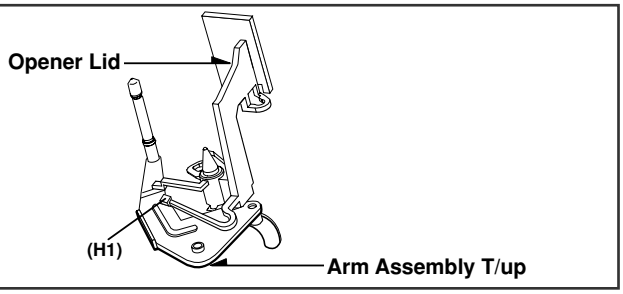
1) Break away the (C) Part of the Opener Lid from the Embossing of the Chassis in the Clockwise direction and lift up the Opener Lid.

18. Arm Assembly T/up (Fig. A-5-4)

1) Just lift up the Arm Assembly T/UP.

NOTE

(1) When reassembling, confirm the opener lid is placed on the Hook(H1) of the Arm Assembly T/UP as below figure.



19. Arm Assembly Pinch (Fig. A-5-5)

1) Lift up the Arm Assembly Pinch.

DECK MECHANISM DISASSEMBLY

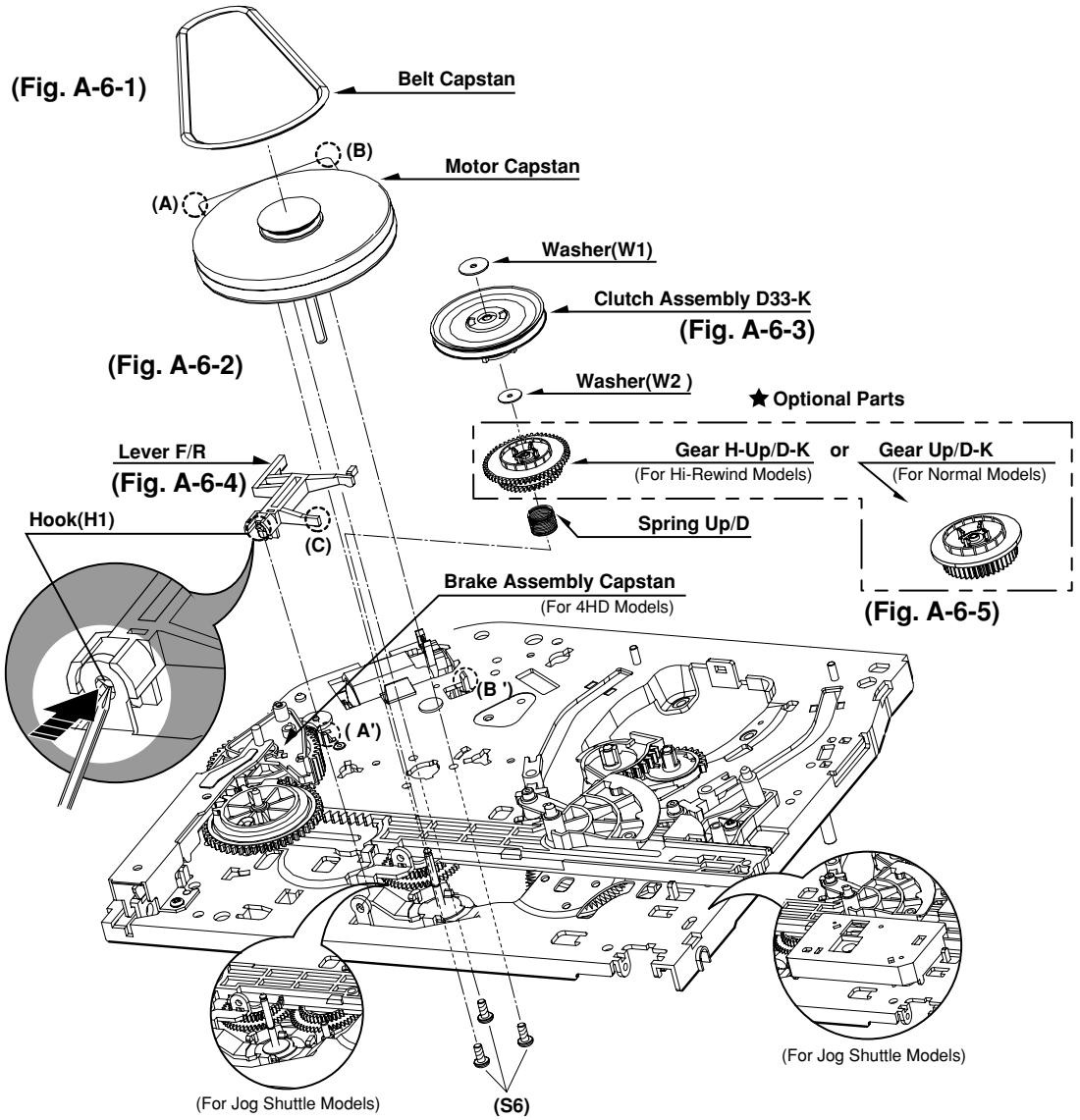


Fig. A-6

20. Belt Capstan (Fig. A-6-1)/ Motor Capstan (Fig. A-6-2)

1) Remove the Belt Capstan.
2) Remove three Screws(S6) on the back side of the Chassis and lift up the Motor Capstan.

NOTE

(1) When reassembling, Confirm the (A), (B) parts of Motor Capstan is located to the (A'), (B') of the Chassis.

21. Clutch Assembly D33-Y (Fig. A-6-3)

1) Remove the Washer(W1) and lift up the Clutch Assembly D33-Y.

22. Lever F/R (Fig. A-6-4)

1) Unhook the (H1) shown above Fig. A-6-4 and lift up the Lever F/R.

NOTE

(1) When reassembling, move the (C) part of the Lever F/R up and down, then confirm if it is returned to original position.

23. Gear H-Up/D-K or Gear Up/D-K (Fig. A-6-5)

1) Remove the Washer(W2) and lift up the Gear H-up/D-K.
2) Remove the Spring Up/D.

NOTE

(1) Gear H-Up/D-K is for Hi-Rewind Models.
(2) Gear Up/D-K is for Normal Models except Hi-Rewind Models.

DECK MECHANISM DISASSEMBLY

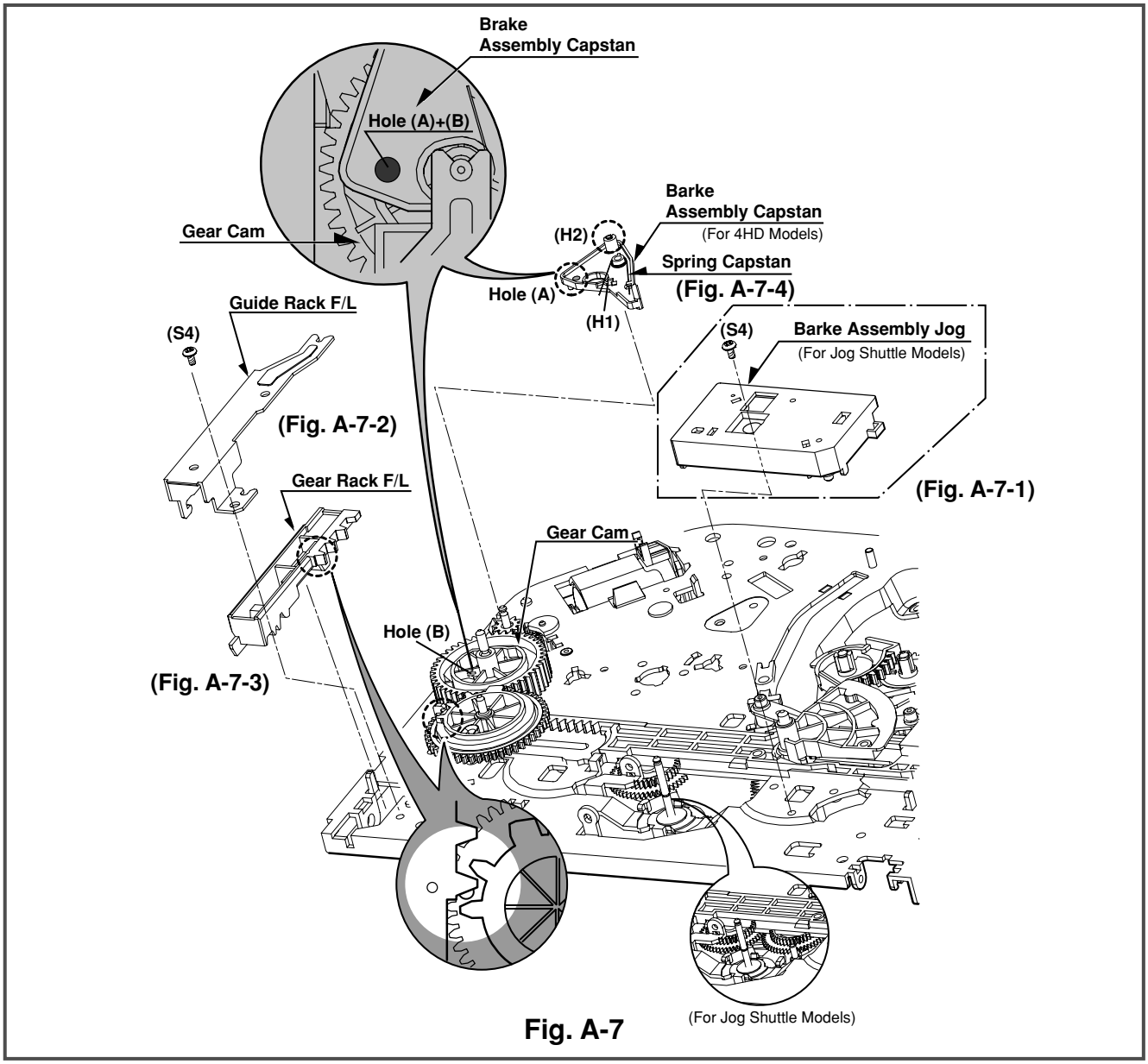


Fig. A-7

24. Bracket Assembly Jog (Fig. A-7-1) (Jog shuttle model option)

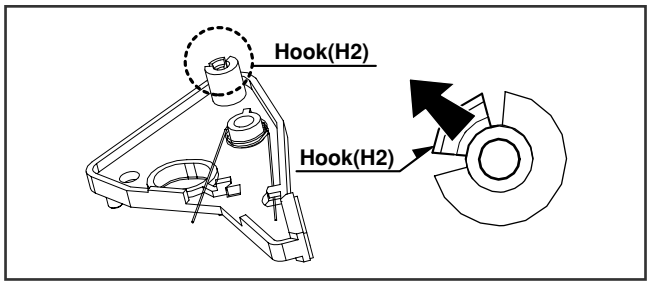
1) Remove the Screw(S4) and lift up the Bracket Assembly Jog.

25. Guide Rack F/L (Fig. A-7-2)/ Gear Rack F/L (Fig. A-7-3)

1) Remove the Screw(S4) and lift up the Guide Rack F/L.
2) Lift up the Gear Rack F/L.

26. Brake Assembly Capstan (Fig. A-7-4) (4HD model option)

1) Hook the Spring Capstan on the Hook(H1).
2) Unhook the Hook(H2) and lift up the Brake Assembly Capstan.(Refer to Fig. to the right)



NOTE

(1) When reassembling, confirm that the Hole(A) of the Brake Assembly Capstan is aligned to the Hole(B) of the Gear Cam.
(Refer to above Fig. A-7-4).

DECK MECHANISM DISASSEMBLY

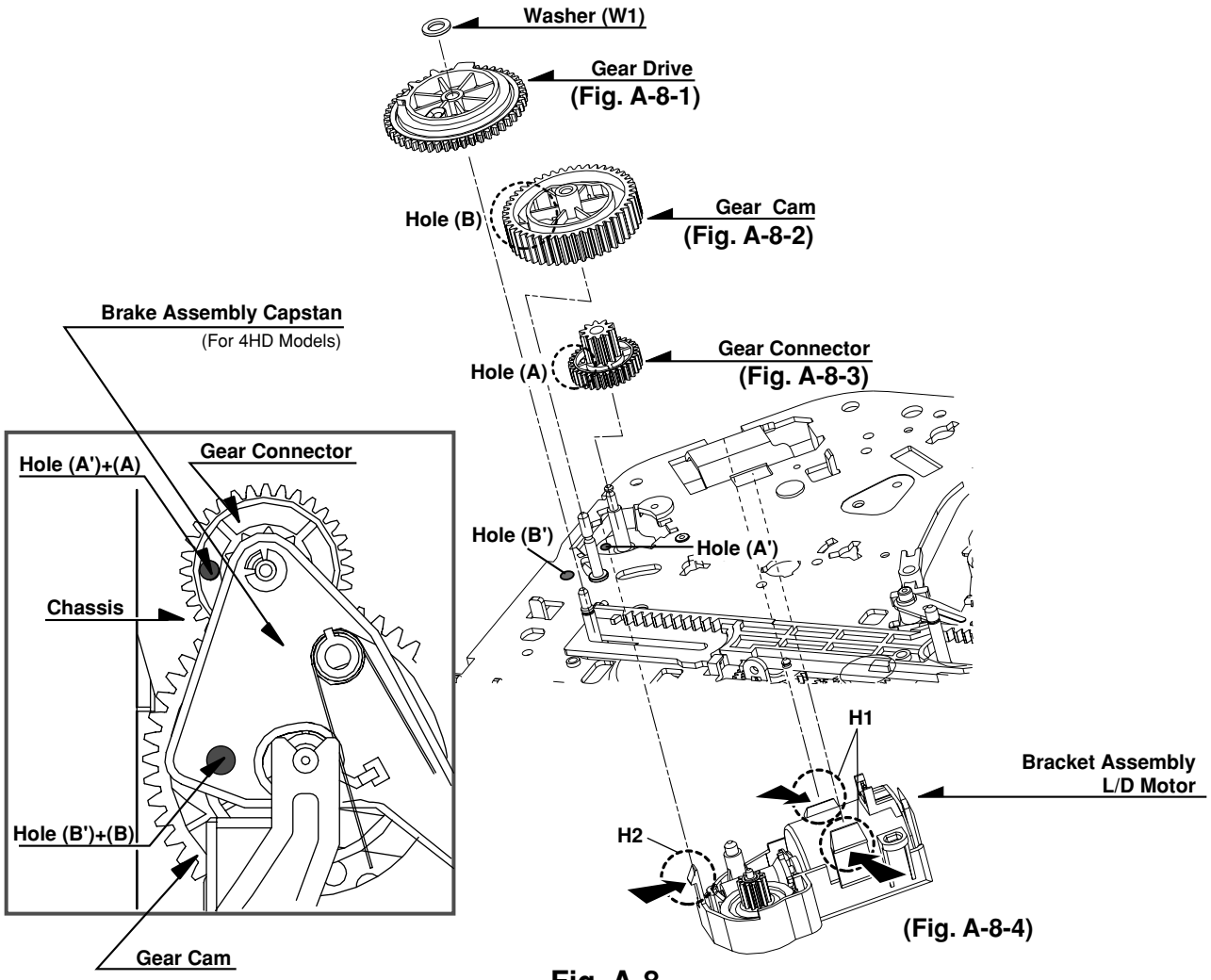


Fig. A-8

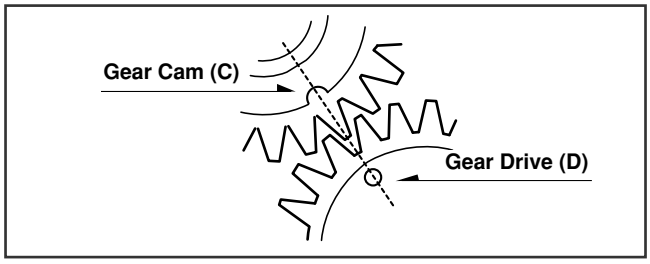
27. Gear Drive (Fig. A-8-1)/ Gear Cam (Fig. A-8-2)/ Gear Connector (Fig. A-8-3)

1) Remove the Washer(W1) and lift up the Gear Drive.
2) Lift up the Gear Cam.
3) Lift up the Gear Connector.

NOTE

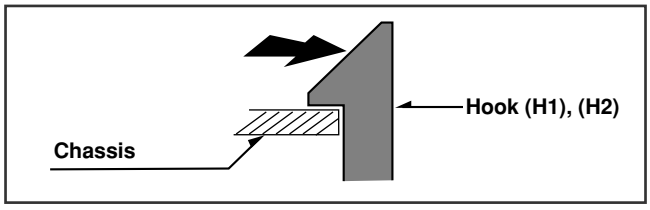
(1) When reassembling, confirm that the Hole (A) of the Gear Connector is aligned to the Hole (A') of the Chassis (Fig. A-8-3).
(2) When reassembling, confirm that the Hole (B) of the Gear Cam is aligned to the Hole (B') of the Chassis (Fig. A-8-2).
(3) When reassembling, confirm that the (C) part of the Gear Cam is aligned to the (D) part of the Gear Drive as shown Fig. B-3

(Fig. B-3)



28. Bracket Assembly L/D Motor (Fig. A-8-4)

1) Unhook the three Hooks(H1),(H2) and push down the Bracket Assembly L/D Motor.



DECK MECHANISM DISASSEMBLY

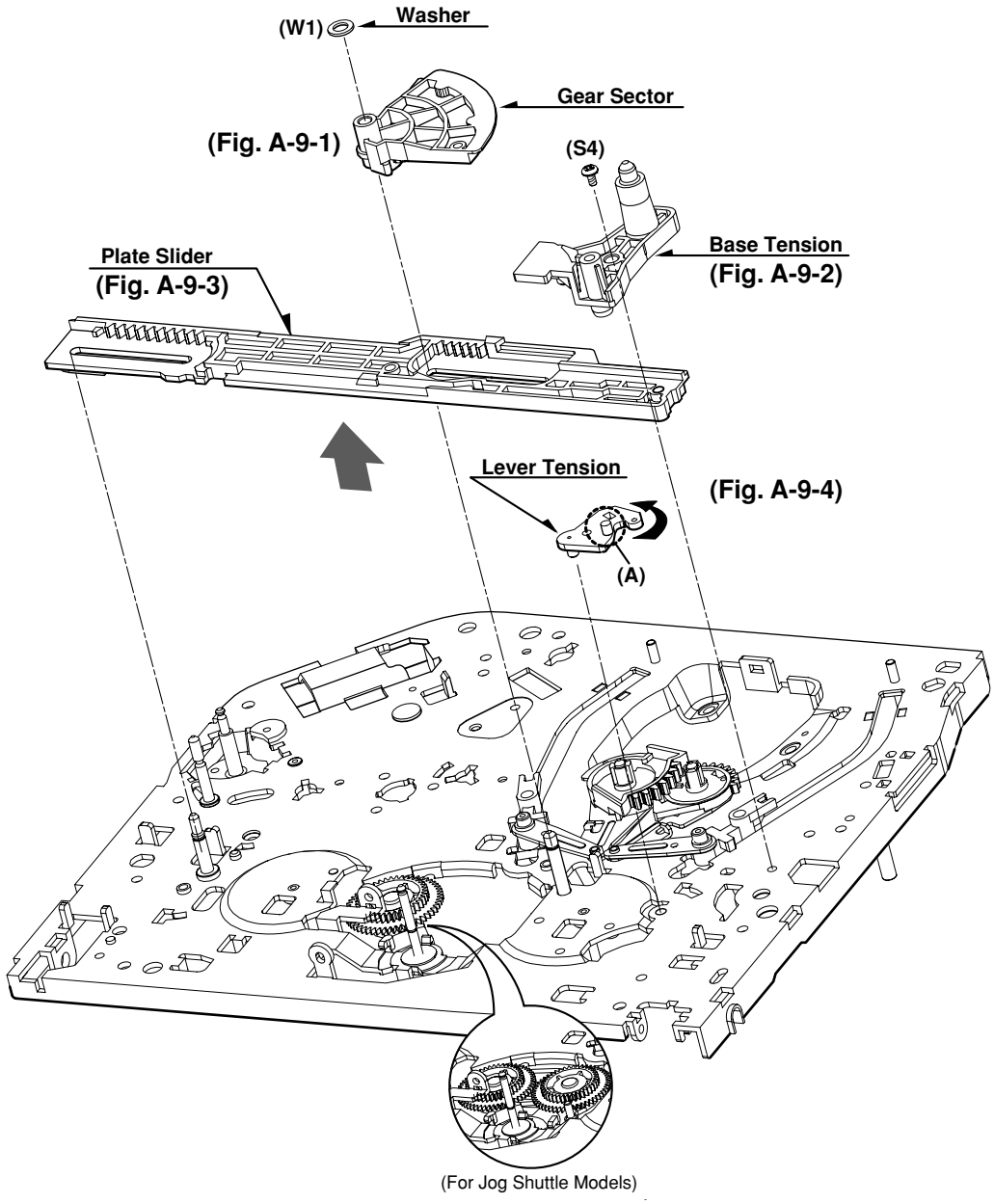


Fig. A-9

29. Gear Sector (Fig. A-9-1)

1) Remove the Washer(W1) and lift up the Gear Sector.

30. Base Tension (Fig. A-9-2)/ Plate Slider (Fig. A-9-3)/ Lever Tension (Fig. A-9-4)

1) Remove the Screw(S4) and lift up the Base Tension.
2) Lift up the Plate Slider.
3) Hold the (A) Part of the Lever Tension and turn to the counterclockwise direction, and then lift up the Lever Tension.

NOTE

(1) When reassembling, turn the Lever Tension to the clockwise direction in maximum.
(2) Push the plate slide right side to be guided by the shaft.

DECK MECHANISM DISASSEMBLY

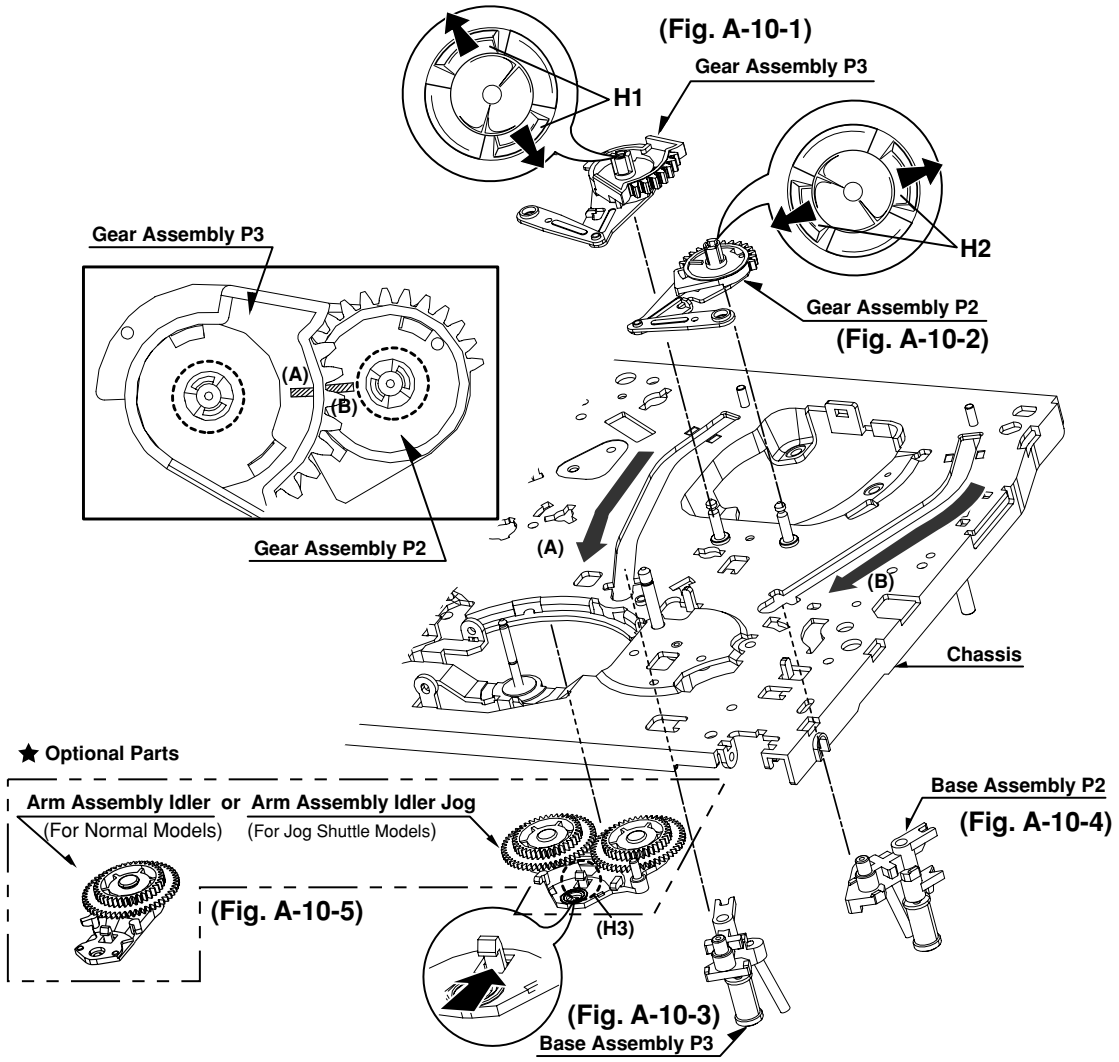


Fig. A-10

31. Gear Assembly P3 (Fig. A-10-1)/ Gear Assembly P2 (Fig. A-10-2)

1) Unhook the two Hooks(H1) and lift up the Gear Assembly P3.
2) Unhook the two Hooks(H2) and lift up the Gear Assembly P2.

32. Base Assembly P3 (Fig. A-10-3)/ Base Assembly P2 (Fig. A-10-4)

1) Move the Base Assembly P3 in the direction of the arrow of the Chassis Hole(A) and push down the Base Assembly P3.
2) Move the Base Assembly P2 in the direction of the arrow of the Chassis Hole(B) and push down the Base Assembly P2.

33. Arm Assembly Idler or Arm Assembly Idler Jog(Fig. A-10-5)

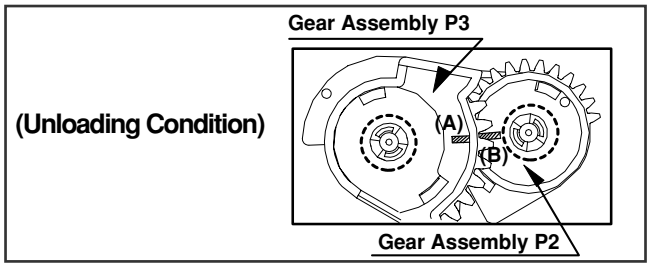
1) Unhook the Hook(H3) and push down the Arm Assembly Idler Jog.

NOTE

1) Arm Assembly Idler is for Normal Models.
2) Arm Assembly Idler Jog is for Jog Shuttle Models.

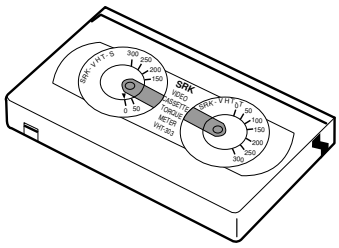
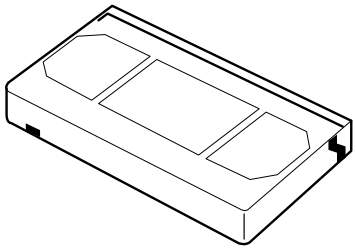
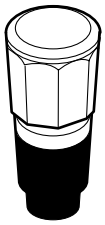
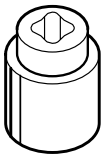
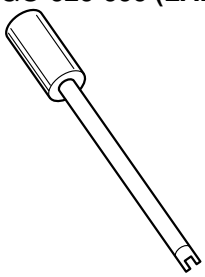
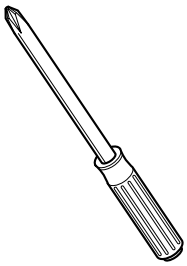
NOTE

1) When reassembling, confirm that the (A) Part of the Gear Assembly P3 is aligned to the (B) Part of the Gear Assembly P2 as shown below.



DECK MECHANISM DISASSEMBLY

• Tools and Fixfures for Service

1. Cassette Torque meter **SRK-VHT-303(Not SVC part)** 	**2. Alignment tape** **(See figure below)** 	**3. Torque gauge** **600g.Cm ATG** 
4. Torque gauge adaptor 	**5. Post height adjusting driver** **Parts No:** **SV-TGO-030-000 (SMALL)** **SV-TGO-020-000 (LARGE)** 	**6. + Type driver (∅ 5)** 

ALIGNMENT TAPES FOR ADJUSTMENT

Derivation No.		A	B	C	D
Mechanism		PAL	PAL	NTSC	NTSC
Adjustment Items		SP/LP 2/4 Head	SP 2 Head	SP/LP/EP 2/4 Head	SP 2 Head
FM Envelope		TTV-P2L	TTV-P2	TTV-N1 (TTN-N12)	TTV-N2
A/C Head	Slantness	A commercially available tape			
	Height	TTV-P1 (TTV-P1L)	TTV-P1	TTV-N1 (TTV-N12) (TTV-N1E)	TTV-N1 (TTV-N12)
	Azimuth	TTV-P2	TTV-P2	TTV-N2	TTV-N2
X-value		TTV-P2 (TTV-P2L)	TTV-P2	TTV-N2 TTV-N2E TTV-N12	TTV-N2
RG Post Inclination		A commercially available tape			
Tape Back Tension		SRK-VHT-303			

The numbers in ( ) parenthesis can be used as the substiture.

DECK MECHANISM ADJUSTMENT

1.Mechanism Alignment Position Check

Purpose:To determine if the Mechanism is in the correct position, when a Tape is ejected.

Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Check Point
• Blank tape	• Eject Mode (with Cassette ejected)	• Mechanism and Mode Switch Position

1) Turn the Power S/W on and eject the Cassette by pressing the Eject Button.
2) Remove the Top Cover and Plate Assembly Top, visually check if the Gear Cam Hole is aligned with the Chassis Hole as below Fig. C-2.
3) IF not, rotate the Shaft of the Loading Motor to either Clockwise or Counterclockwise until the Alignment is as below Fig. C-2.
4) Remove the Screw which fixes the Deck Mechanism and Main Frame and confirm if the Gear Cam is aligned with the Gear Drive as below Fig. C-1(A).
5) Confirm if the Mode S/W on the Main P.C.Board is aligned as below Fig. C-1(B).
6) Remount the Deck Mechanism on the Main P.C.Board and check each operation.

CHECK DIAGRAM

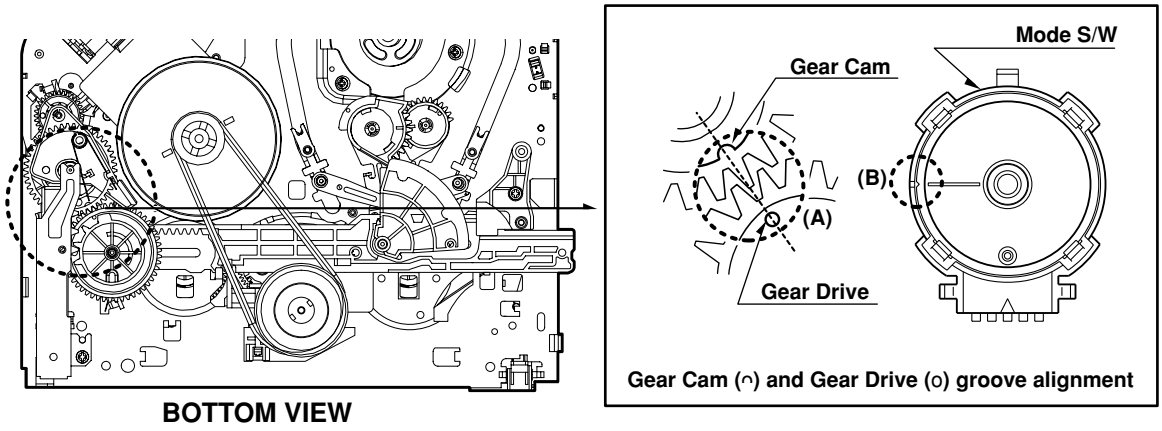


Fig. C-1

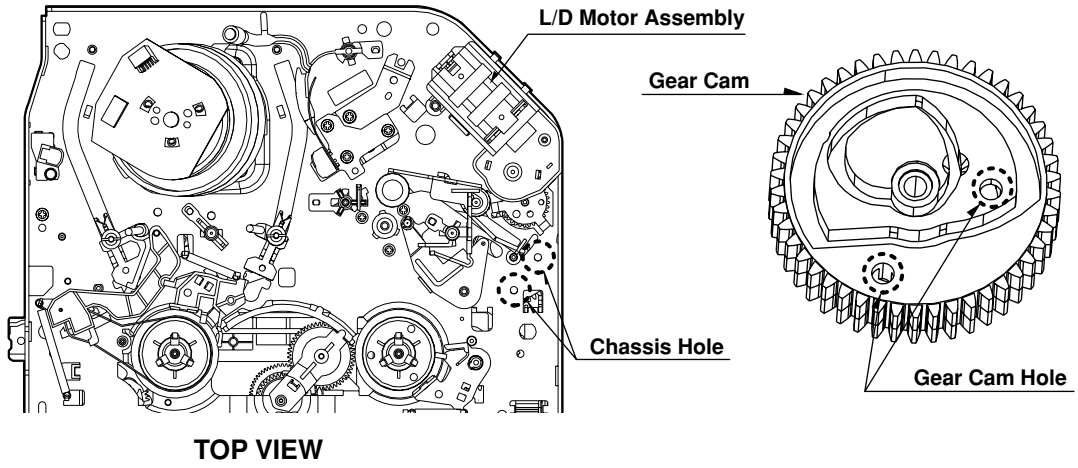


Fig. C-2

DECK MECHANISM ADJUSTMENT

2. Preparation for Adjustment (To set the Deck Mechanism to the Loading state without inserting a Cassette Tape).

1) Unplug the Power Cord from the AC Outlet.
2) Disassemble the Top Cover and Plate Assembly Top.
3) Plug the Power Cord into the AC Outlet.
4) Turn the Power S/W on and push the Lever Stopper (L),(R) of the Holder Assembly CST to the back for Loading the Cassette without Tape.
   Cover the Holes of the End Sensors at the both sides of the Bracket Side(L) and Bracket Assembly Door to prevent a light leak.
   Then The Deck Mechanism drives to the Stop Mode.
   In this case, The Deck Mechanism can accept inputs of each mode, however the Rewind and Review Operation can not be performed for more than a few seconds because the Take-up Reel Table is in the Stop State and can not be detected the Reel Pulses.

3. Checking Torque

Purpose: To insure smooth Transport of the Tape during each Mode of Operation.
If the Tape Transport is abnormal, then check the Torque as indicated by the chart below.

Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Checking Method
• Torque Gauge(600g/cm ATG) • Torque Gauge Adaptor • Cassette Torque Meter SRK-VHT-303	• Play (FF) or Review (REW) Mode	• Perform each Deck Mechanism Mode without inserting a Cassette Tape(Refer to above No.2 Preparation for Adjustment). • Read the Measurement of the Take-up or Supply Reels on the Cassette Torque Meter(Fig. C-3-2). • Attach the Torque Gauge Adaptor to the Torque Gauge and then read the Value of it(Fig. C-3-1).

Item	Mode	Test Equipment	Measurement Reel	Measurement Values
Fast Forward Torque	Fast Forward	Cassette Torque Gauge	Take-Up Reel	More than 400g/cm
Rewind Torque	Rewind	Cassette Torque Gauge	Supply Reel	More than 400g/cm
Play Take-Up Torque	Play	Cassette Torque Meter	Take-Up Reel	70~120g/cm
Review Torque	Review	Cassette Torque Meter	Supply Reel	130~210g/m

NOTE:

The Values are measured by using a Torque Gauge and Torque Gauge Adaptor with the Torque Gauge affixed.

• Cassette Torque Meter (SRK-VHT-303)

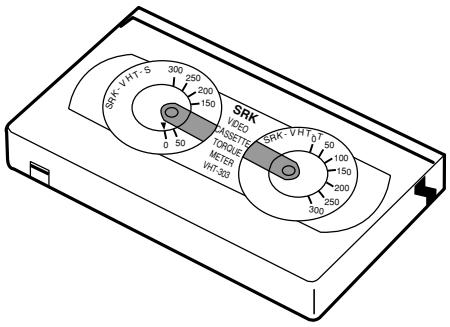


Fig. C-3-2

NOTE:

The Torque reading to measure occurs when the Tape abruptly changes direction from Fast Forward of Rewind Mode, when quick bracking is applied to both Reels.

• Torque Gauge (600g.cm ATG)

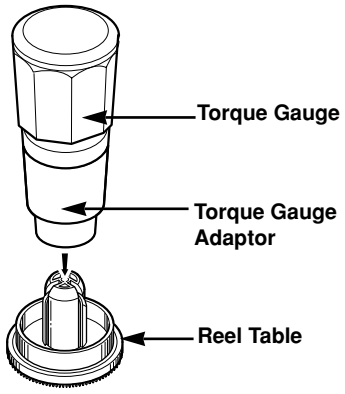


Fig. C-3-1

DECK MECHANISM ADJUSTMENT

4.Guide Roller Height Adjustment

Purpose: To regulate the Height of the Tape so that the Bottom of the Tape runs along the Tape Guide Line on the Lower Drum.

4-1. Preliminary Adjustment

Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Adjustment Point
• Post Height Adjusting Driver	• Play or Review Mode	• Guide Roller Height Adjustment screws on the Supply and Take-Up Guide Rollers.

Adjustment Procedure

1) Confirm if the Tape runs along the Tape Guide Line of the Lower Drum.
2) If the Tape runs the Bottom of the Guide Line, turn the Guide Roller Height Adjustment Screw to Clockwise direction.
3) If it runs the Top, turn to Counterclockwise direction.
4) Adjust the Height of the Guide Roller to be guided to the Guide Line of the Lower Drum from the Starting and

ADJUSTMENT DIAGRAM

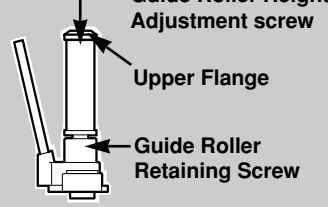


Fig. C-4-1

4-2. Precise Adjustment

Test Equipment/Fixture	Test Equipment Connection Points	Test Conditions VCR(VCP) State	Adjustment Point
• Oscilloscope • Alignment Tape • Post Height Adjusting Driver	• CH-1:PB RF Envelope • CH-2:NTSC: SW 30Hz PAL: SW 25Hz • Head Switching Output Point • RF Envelope Output Point	• Play an Alignment Tape	• Guide Roller Height Adjustment Screws

Adjustment Procedure

1) Play an Alignment Tape after connecting the Probe of the Oscilloscope to the RF Envelope Output Test Point and Head Switching Output Test Point.
2) Tracking Control(in PB Mode) : Center Position(When this Adjustment is performed after the Drum Assembly has been replaced, set the Tracking Control so that the RF Output is Maximum).
3) Height Adjustment Screw : Flatten the RF Waveform. (Fig. C-4-2)
4) Turn(Move) the Tracking Control(in PB Mode) Clockwise and Counterclockwise.(Fig. C-4-3)
5) Check that any Drop of RF Output is uniform at the Start and End of the Waveform.

NOTE

If the adjustment is excessive or insufficient the tape will jam or fold.

Waveform Diagrams

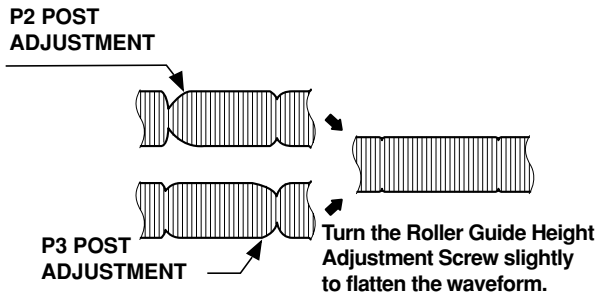


Fig. C-4-2

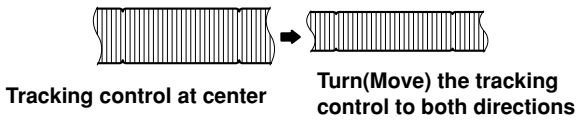
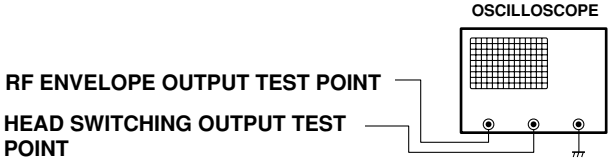


Fig. C-4-3

Connection Diagram



DECK MECHANISM ADJUSTMENT

5. Audio/Control (A/C) Head Adjustment

Purpose: To insure that the Tape passes accurately over the Audio and Control Tracks in exact Alignment in both the Record and Playback Modes.

5-1. Preliminary Adjustment (Height and Tilt Adjustment)
Perform the Preliminary Adjustment, when there is no Audio Output Signal with the Alignment Tape.

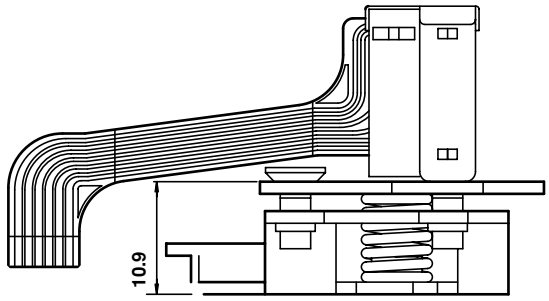
Test Equipment/ Fixture	Test Conditions (Mechanism Condition)	Adjustment Point
• Blank Tape • Screw Driver(+) Type 5mm	• Play the blank tape	• Tilt Adjustment Screw(C) • Height Adjustment Screw(B) • Azimuth Adjustment Screw(A)

Adjustment Procedure/Diagrams

1) Initially adjust the Base Assembly A/C Head as shown Fig. C-5-1 by using the Height Adjustment Screw(B).
2) Play a Blank Tape and observe if the Tape passes accurately over the A/C Head without Tape Curling or Folding.
3) If Folding or Curling is occured then adjust the Tilt Adjustment Screw(C) while the Tape is running to resemble Fig. C-5-3.
4) Reconfirm the Tape Path after Playback about 4~5 seconds.

NOTE

Ideal A/C head height occurs, when the tape runs between 0.2~0.25mm above the bottom edge of the A/C head core.



A/C Head Base

Fig. C-5-1

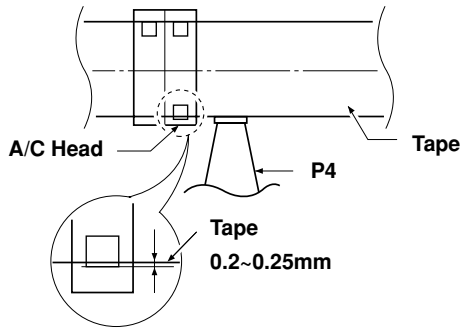
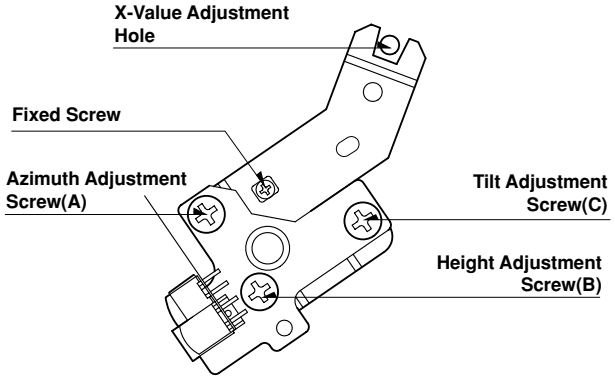


Fig. C-5-3



A/C Head Assembly

Fig. C-5-2

5-2. Confirm that the Tape passes smoothly between the Take-up Guide and Pinch Roller(using a Mirror or the naked eye).

1) After completing Step 5-1.(Preliminary Adjustment), check that the Tape passes around the Take-up Guide and Pinch Roller without Folding or Curling at the Top or Bottom.
   (1) If Folding or Curling is observed at the Bottom of the Take-up Guide then slowly turn the Tilt Adjustment Screw(C) in the Clockwise direction.
   (2) If Folding or Curling is observed at the Top of it then slowly turn the Tilt Adjustment Screw(C) in the Counterclockwise direction.

NOTE:

Check the RF Envelope after adjusting the A/C Head, if the RF Waveform differs from Fig. C-5-4, performs Precise Adjustment to flat the RF Waveform.

5-3. Precise Adjustment (Azimuth adjustment)

Test Equipment/ Fixture	Connection Point	Test Conditions (Mechanism Condition)	Adjustment Point
• Oscilloscope • Alignment Tape(SP) • Screw Driver(+) Type 5mm	• Audio output jack	• Play an Alignment Tape 1KHz, 7KHz Sections	• Azimuth Adjustment Screw(A) • Height Adjustment Screw(B)

Adjustment Procedure

1) Connect the Probe of the Oscilloscope to Audio Output Jack.
2) Alternately adjust the Azimuth Adjustment Screw(A) and the Tilt Adjustment Screw(C) for Maximum Output of the 1Khz and 7Khz segments, while maintaining the flattest Envelope differential between the two Frequencies.

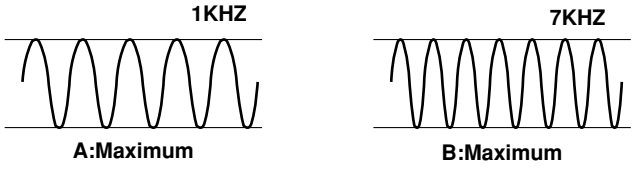
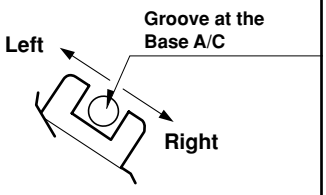


Fig. C-5-4

6. X-Value Adjustment

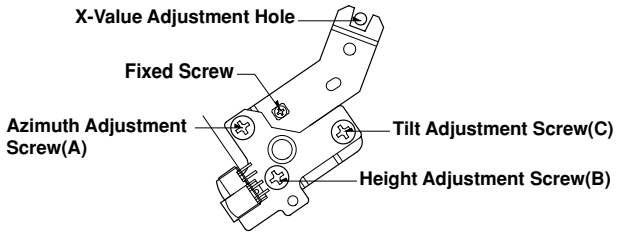
Purpose: To obtain compatibility with other VCR(VCP) Models.

Test Equipment/ Fixture	Connection Point	Test Conditions (Mechanism Condition)	Adjustment Point
• Oscilloscope • Alignment tape(SP only) • Screw Driver(+) Type 5mm	• CH-1: PB RF Envelope • CH-2: NTSC: SW 30Hz PAL: SW 25Hz • Head Switching Output Test Point • RF Envelope Output Test Point	• Play an Alignment Tape	

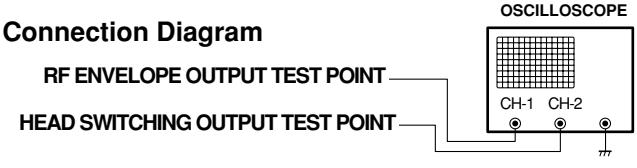
Adjustment Procedure

1) Release the Automatic Tracking to run long enough for Tracking to complete it's Cycle.
2) Loosen the Fixed Mounting Screw and move the Base Assembly A/C Head in the direction as shown in the Diagram to find the center of the peak that allows for the maximum Waveform Envelope.
   This method should allow the 31um Head to be centrally located over the 58um Tape Track.
3) Tighten the Base Assembly A/C Head mounting Screw.

Adjustment Diagram



Connection Diagram



DECK MECHANISM ADJUSTMENT

7. Adjustment after Replacing Drum Assembly (Video Heads)

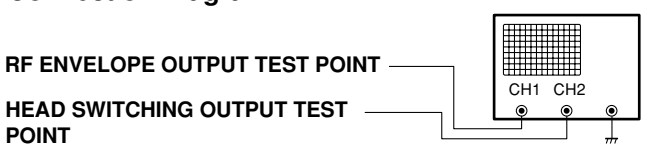
Purpose: To correct for shift in the Roller Guide and X value after replacing the Drum.

Test Equipment/ Fixture	Connection Point	Test Conditions (Mechanism Condition)	Adjustment Points
• Oscilloscope • Alignment tapes • Blank Tape • Post Height Adjusting Driver • Screw Driver(+) Type 5mm	• CH-1: PB RF Envelope • CH-2: NTSC: SW 30Hz PAL: SW 25Hz • Head Switching Output Test Point • RF Envelope Output Test Point	• Play the blank tape • Play an alignment tape	• Guide Roller Precise Adjustment • Switching Point • Tracking Preset • X-Value

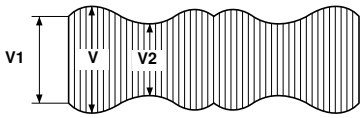
Checking/Adjustment Procedure

Play a blank tape and check for tape curling or creasing around the roller guide. If there is a problem then follow the procedure 4. "Guide Roller Height" and 5. "Audio Control(A/C) Head Adjustment".

Connection Diagram



Waveform



V1/V MAX ≦ 0.7
V2/V MAX ≦ 0.8
RF ENVELOPE OUTPUT

Fig. C-7

8. Check the Tape Travel after Reassembling Deck Assembly.

8-1.Check Audio and RF Locking Time during playback and after CUE or REV (FF/REW)

Test Equipment/ Fixture	Specification	Connection Points	Test Conditions (Mechanism Condition)
• Oscilloscope • Alignment tapes(with 6H 3kHz Color Bar Signal) • Stop Watch	• RF Locking Time: Less than 5 sec. • Audio Locking Time:Less than 10sec	• CH-1: PB RF Envelope • CH-2: Audio Output • RF Envelope Output Point • Audio Output Jack	• Play an alignment tape (with 6H 3kHz Color Bar Signal)

Checking Procedure

Play an alignment tape then change the operating mode to CUE or REV and confirm if the unit meets the above listed specifications.

NOTES:

1) CUE is fast forward mode (FF)
2) REV is the rewind mode (REW)
3) Referenced to the Play mode

8-2.Check for tape curling or jamming

Test Equipment/ Fixture	Specification	Test Conditions (Mechanism Condition)
• T-160 Tape • T-120 Tape	• Be sure there is no tape jamming or curling at the begining, middle or end of the tape.	• Run the CUE, REV play mode at the beginning and the end of the tape.

Checking Procedure

1) Confirm that the tape runs smoothly around the roller guides, drum and A/C head assemblies while abruptly changing operating modes from Play to CUE or REV. This is to be checked at the begining, middle and end sections of the cassette.
2) Confirm that the tape passes over the A/C head assembly as indicated by proper audio reproduction and proper tape counter performance.

MAINTENANCE/INSPECTION PROCEDURE

1 Check before starting repairs

The following faults can be remedied by cleaning and oiling. Check the needed lubrication and the conditions of cleanliness in the unit.
Check with the customer to find out how often the unit is used, and then determine that the unit is ready for inspection and maintenance. Check the following parts.

Phenomenon	Inspection	Replace-ment	
Color beats	Dirt on full-erase head	o	F/E Head
Poor S/N, no color	Dirt on video head	o	Video Head
Vertical or Horizontal jitter	Dirt on video head Dirt on tape transport system	o	
Low volume, Sound distorted	Dirt on Audio/control head	o	A/C Head
Tape does not run. Tape is slack	Dirt on pinch roller	o	Pinch Roller Belt Capston
In Review and Unloading (off mode), the Tape is rolled up loosely.	Clutch Assembly D33K Torque reduced	o	Clutch Assembly D33K
	Cleaning Drum and transport system	Fig. C-9-3	

NOTE

If locations marked with **o** do not operate normally after cleaning, check for wear and replace.
See the EXPLODED VIEWS at the end of this manual as well as the above illustrations See the Greasing (Page 101) for the sections to be lubricated and greased.

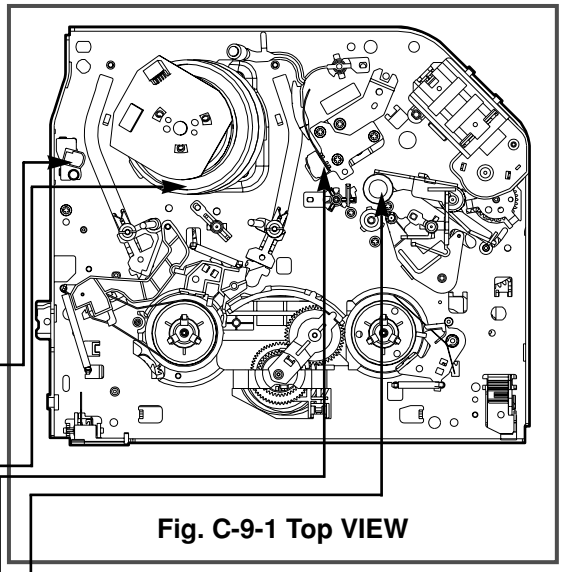


Fig. C-9-1 Top VIEW

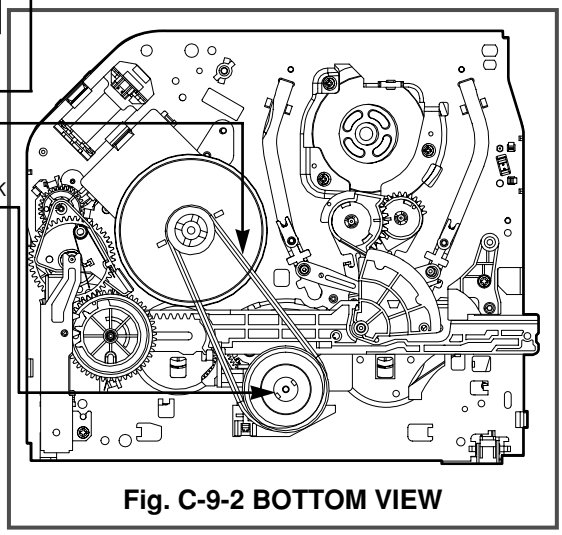


Fig. C-9-2 BOTTOM VIEW

*** No. (1)~(13) Indicates the Tape Path to be traveled from Supply Reel to Take-up Reel.**

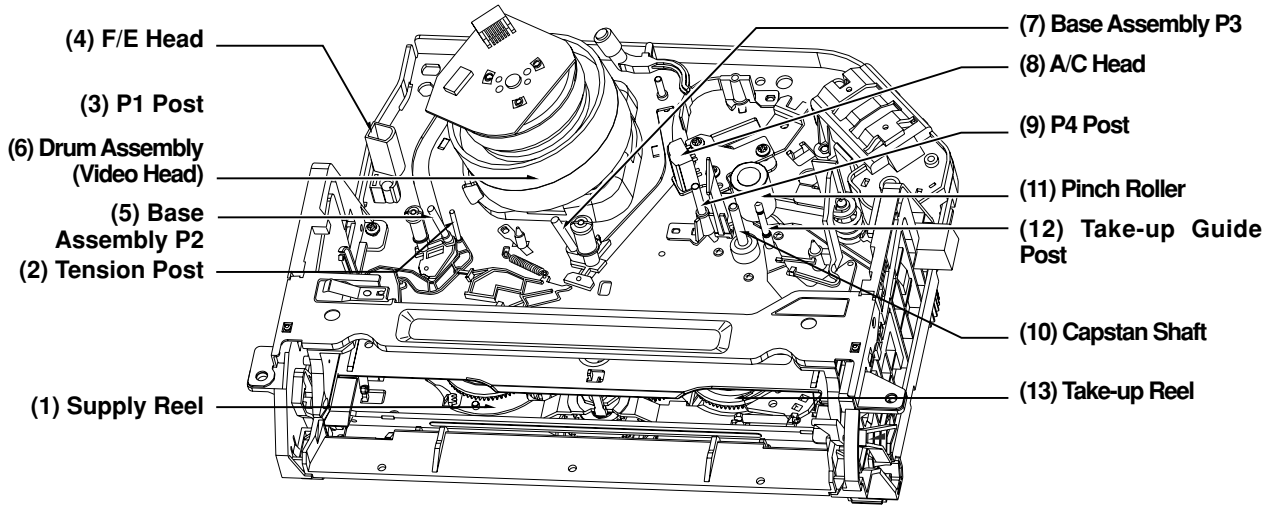


Fig. C-9-3 Tape Transport System

MAINTENANCE/INSPECTION PROCEDURE

2. Required Maintenance

The recording density of a VCR(VCP) is much higher than that of an audio tape recorder. VCR(VCP) components must be very precise, at tolerances of 1/1000mm, to ensure compatiblity with other VCRs. If any of these components are worn or dirty, the symptoms will be the same as if the part is defective. To ensure a good picture, periodic inspection and maintenance, including replacement of worn out parts and lubrication, is necessary.

3. Scheduled Maintenance

Schedules for maintenance and inspection are not fixed because they vary greatly according to the way in which the customer uses the VCR(VCP), and the environment in which the VCR(VCP) is used.
But, in general home use, a good picture will be maintained if inspection and maintenance is made every 1,000 hours. The table below shows the relation between time used and inspection period.

Table 1

When inspection is necessary / Average hours used per day	About 1 year	About 18 months	About 3 years
One hour	■	■	■
Two hours	■	■	
Three hours	■		

4. Supplies Required for Inspection and Maintence

(1) Grease : Kanto G-311G (Blue) or equivalent
(2) Isopropyl Alcohol or equivalent
(3) Cleaning Patches
(4) Grease : Kanto G-381(Yellow) : Used only for Reel S and Reel T

5) Maintenance Procedure
5-1) Cleaning

(1) Cleaning video head
First use a cleaning tape. If the dirt on the head is too stubborn to remove by tape, use the cleaning patch. Coat the cleaning patch with Isopropyl Alcohol. Touch the cleaning patch to the head tip and gently turn the head(rotating cylinder) right and left.
(Do not move the cleaning patch vertically. Make sure that only the buckskin on the cleaning patch comes into contact with the head. Otherwise, the head may be damaged.)
Thoroughly dry the head. Then run the test tape. If Isopropyl Alcohol remains on the video head, the tape may be damaged when it comes into contact with the head surface.
(2) Clean the tape transport system and drive system, etc, by wiping with a cleaning patch wetted with Isporopyl Alcohol.

NOTES:

① It is the tape transport system which comes into contact with the running tape. The drive system consists of those parts which moves the tape.
② Make sure that during cleaning you do not touch the tape transport system with the tip of a screw driver and no that force is that would cause deforming or damage applied to the system.

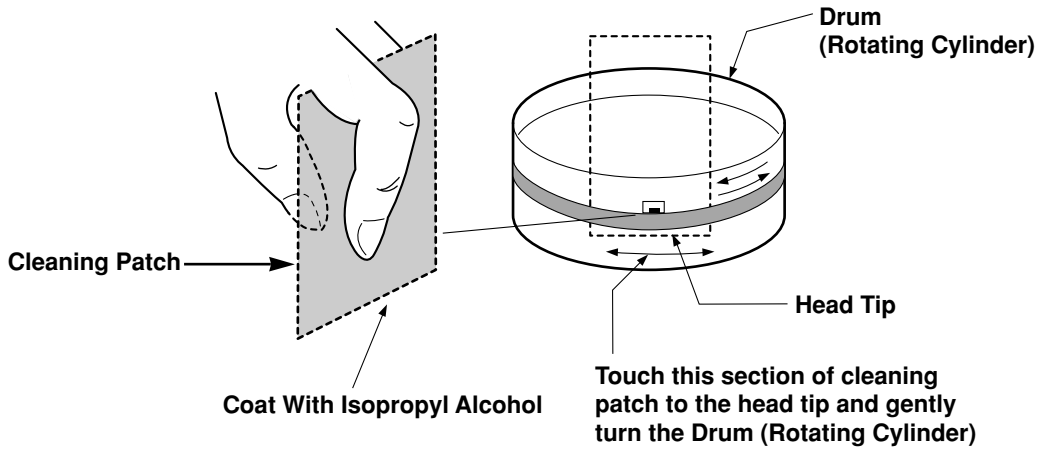


Fig. C-9-4

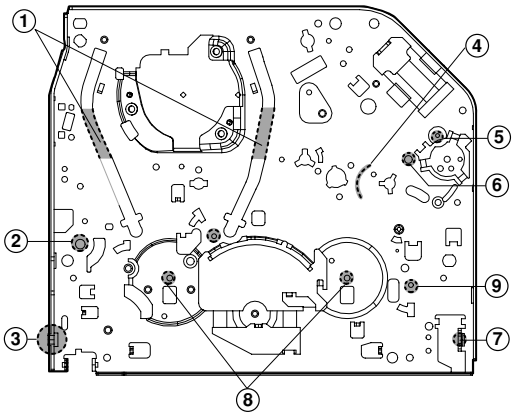
MAINTENANCE/INSPECTION PROCEDURE

5-2) Greasing

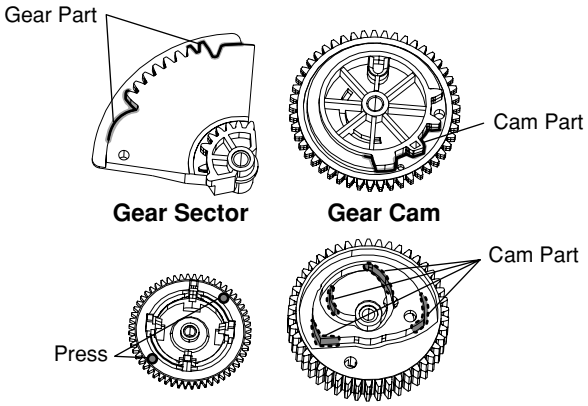
(1) Greasing guidelines
Apply grease, with a cleaning patch. Do not use excess grease. It may come into contact with the tape transport or drive system. Wipe any excess and clean with clean ing patch wetted in Isopropyl Alcohol.

NOTE:Greasing Points

1) Loading Path Inside & Top side
2) Base Tension Boss inside Hole
3) Arm Assembly F/L "U" Groove
4) Arm Take-up Rubbing Section
5) L/D Motor Worm Wheel Part
6) Shaft
7) Arm Assembly F/L of Burning Inside Hole
8) Reel S, T Shaft (G381:Yellow)
9) Brake T Groove

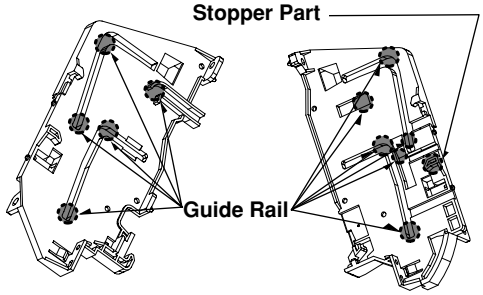


Chassis (Top)



Gear Sector **Gear Cam**

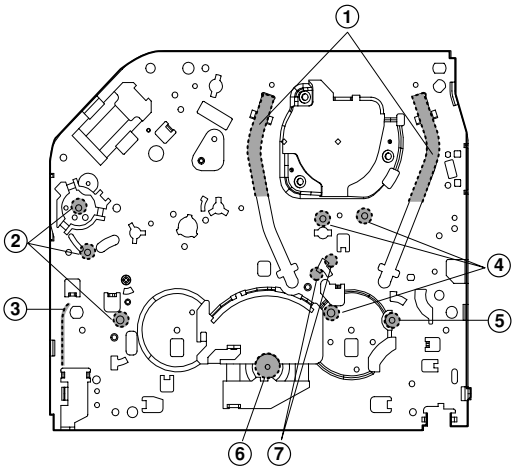
Gear Assembly Up/D **Gear Drive**



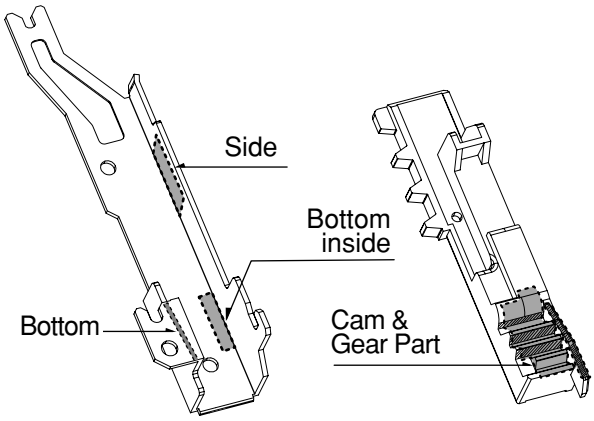
Bracket Side (L) **Bracket Assembly Door**

(2) Periodic greasing
Grease specified locations every 5,000 hours.

1) Loading Path Inside & Top side
2) Shaft
3) Gear Rack F/L Moving Section
4) Shaft
5) Lever Tension Groove
6) Clutch Assembly D33 Shaft
7) Brake "S" Rubbing Section



Chassis (Bottom)



Guide Rack F/L **Gear Rack F/L**

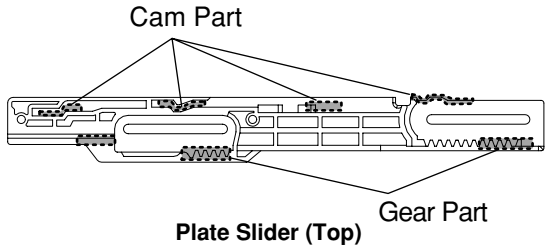


Plate Slider (Top)

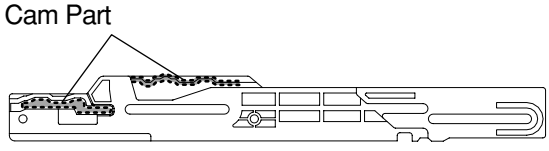
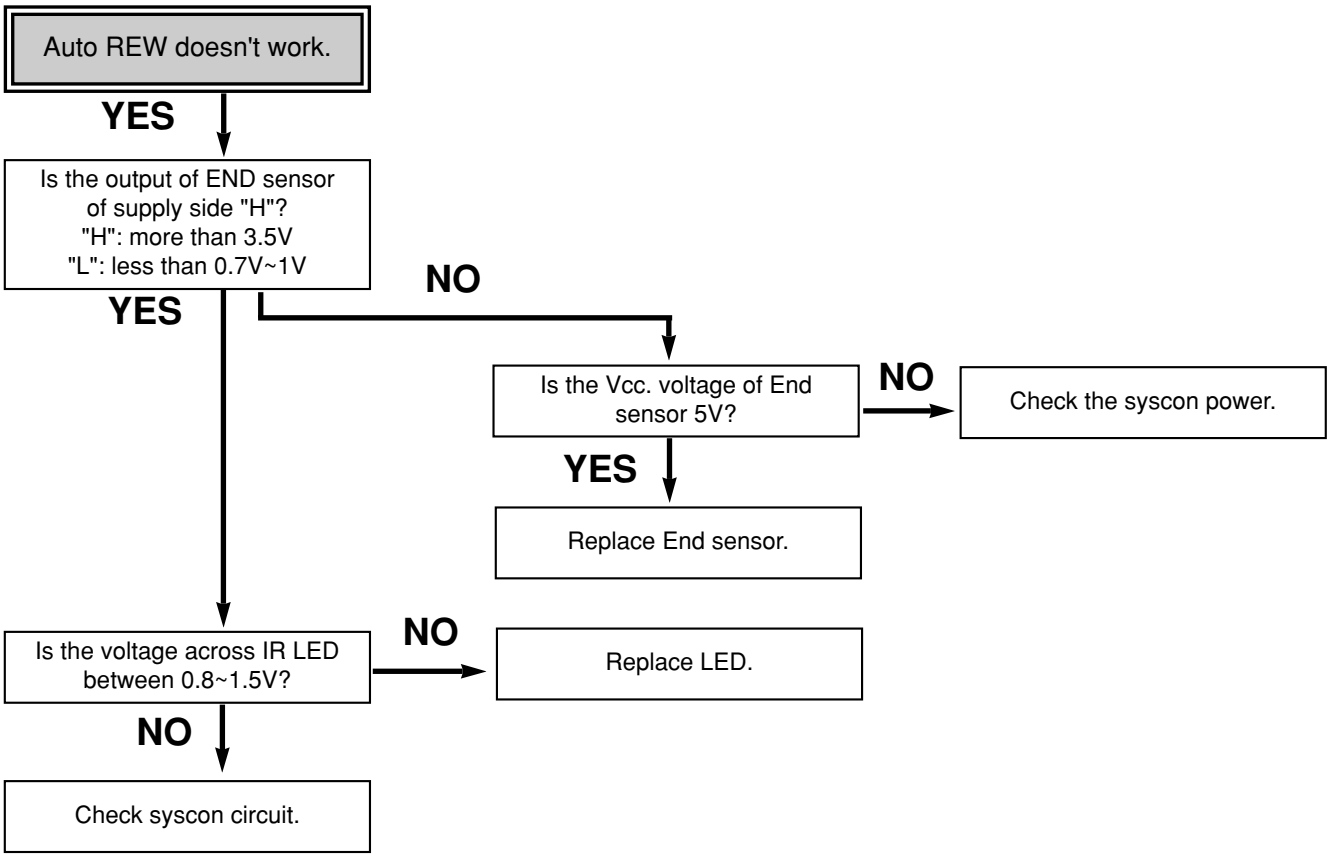


Plate Slider (Bottom)

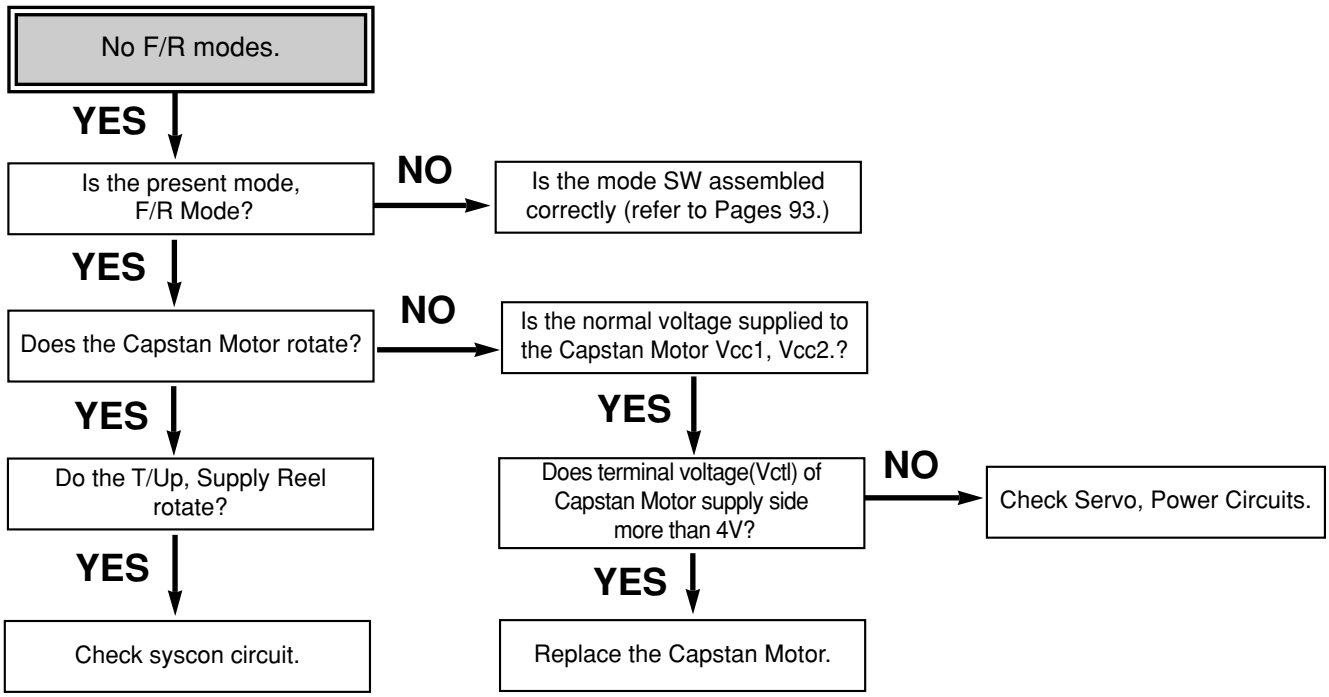
MECHANISM TROUBLESHOOTING GUIDE

1.Deck Mechanism

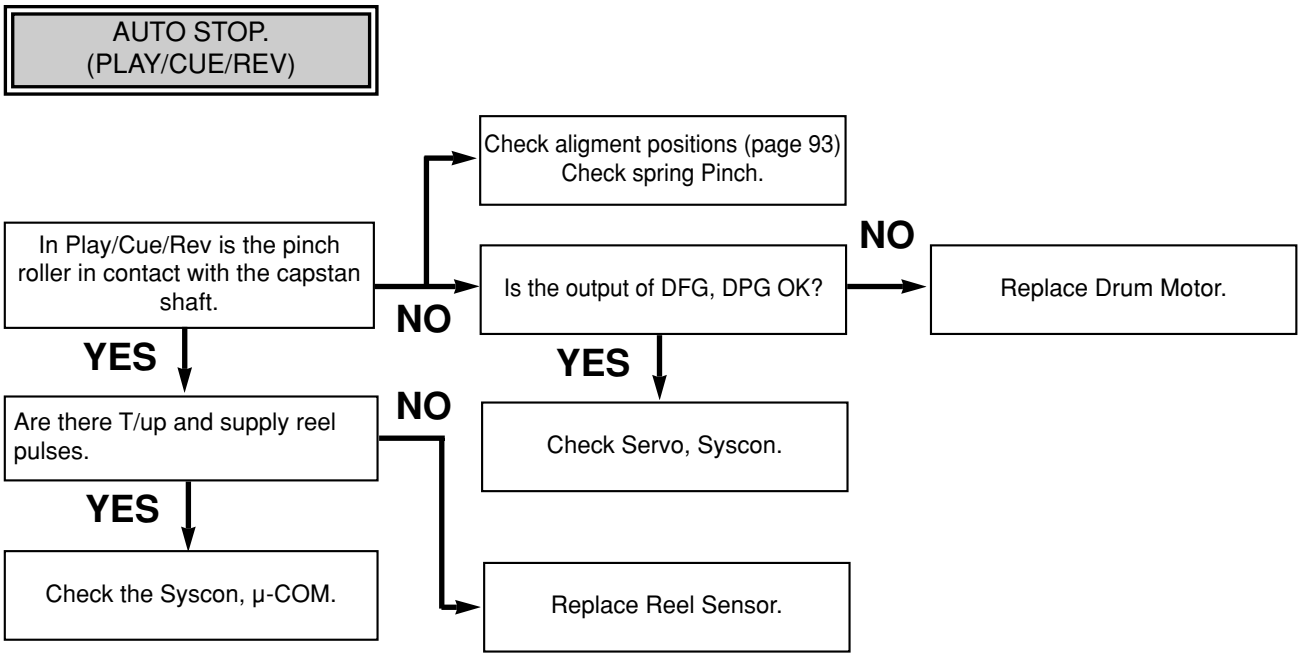
A.



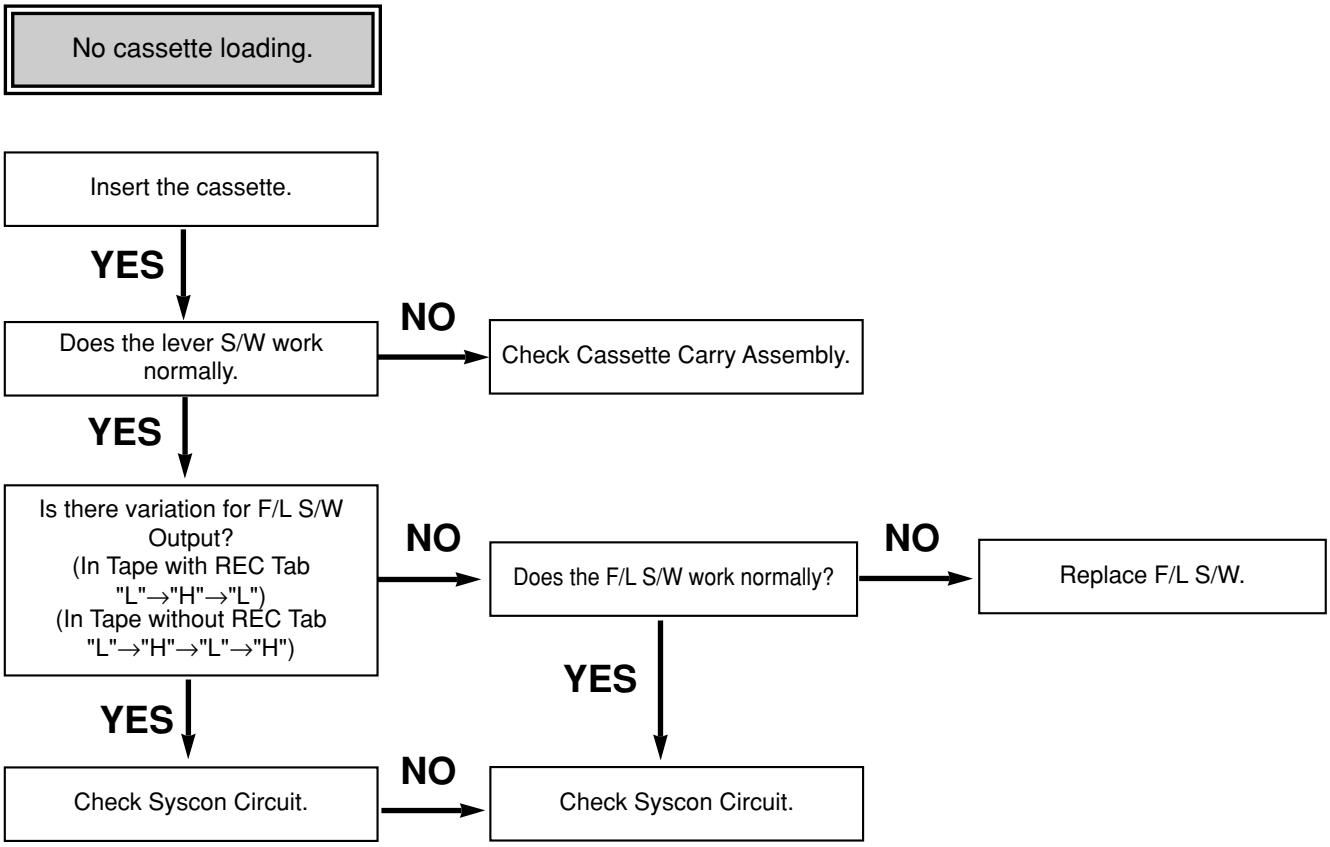
B.



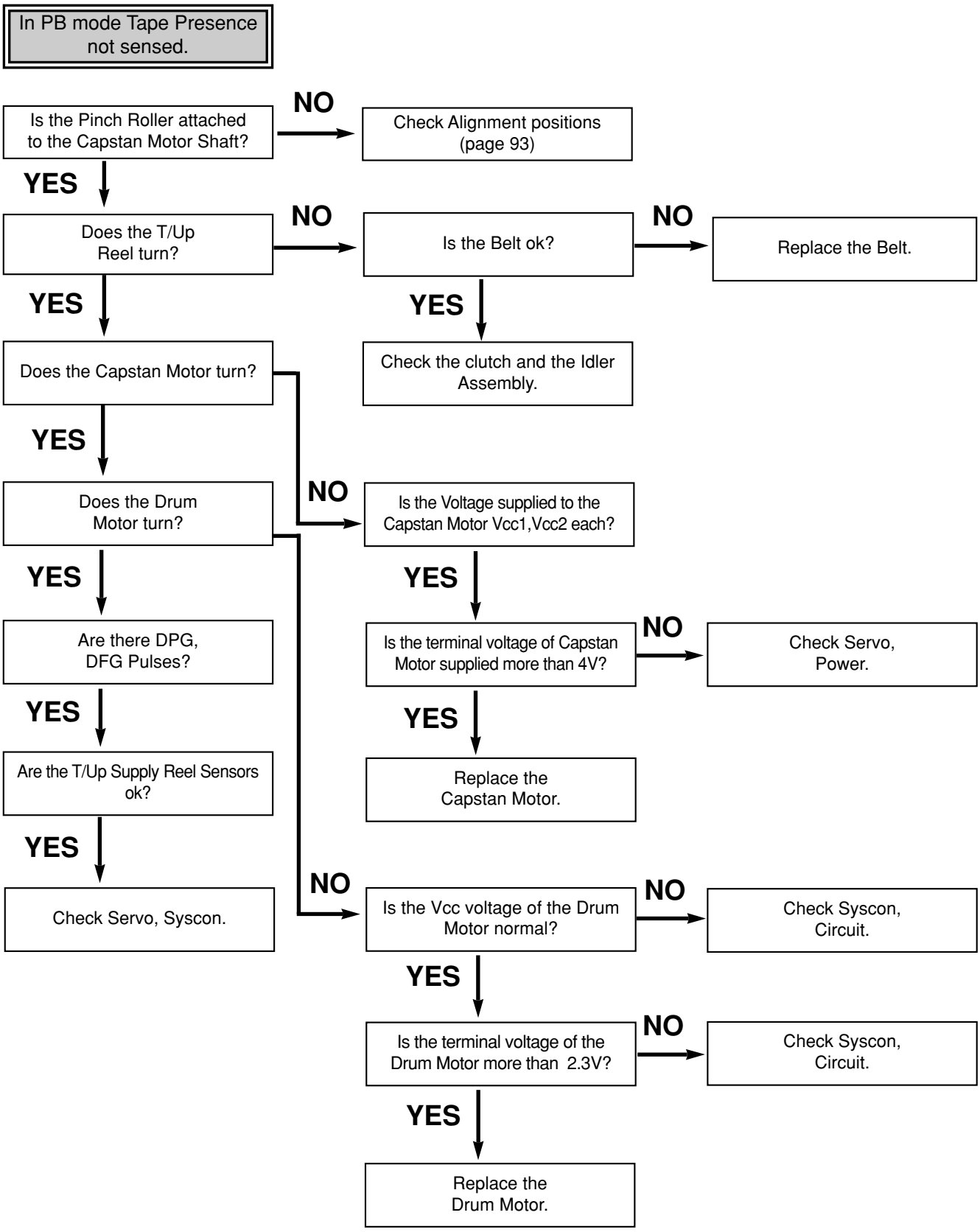
C.


AUTO STOP.
(PLAY/CUE/REV)
In Play/Cue/Rev is the pinch roller in contact with the capstan shaft.
Check aligment positions (page 93)
Check spring Pinch.
NO
Is the output of DFG, DPG OK?
NO
Replace Drum Motor.
YES
YES
Are there T/up and supply reel pulses.
NO
Check Servo, Syscon.
YES
Check the Syscon, µ-COM.
Replace Reel Sensor.

D.


No cassette loading.
Insert the cassette.
YES
Does the lever S/W work normally.
NO
Check Cassette Carry Assembly.
YES
Is there variation for F/L S/W Output?
(In Tape with REC Tab
"L"→"H"→"L")
(In Tape without REC Tab
"L"→"H"→"L"→"H")
NO
Does the F/L S/W work normally?
NO
Replace F/L S/W.
YES
YES
Check Syscon Circuit.
NO
Check Syscon Circuit.

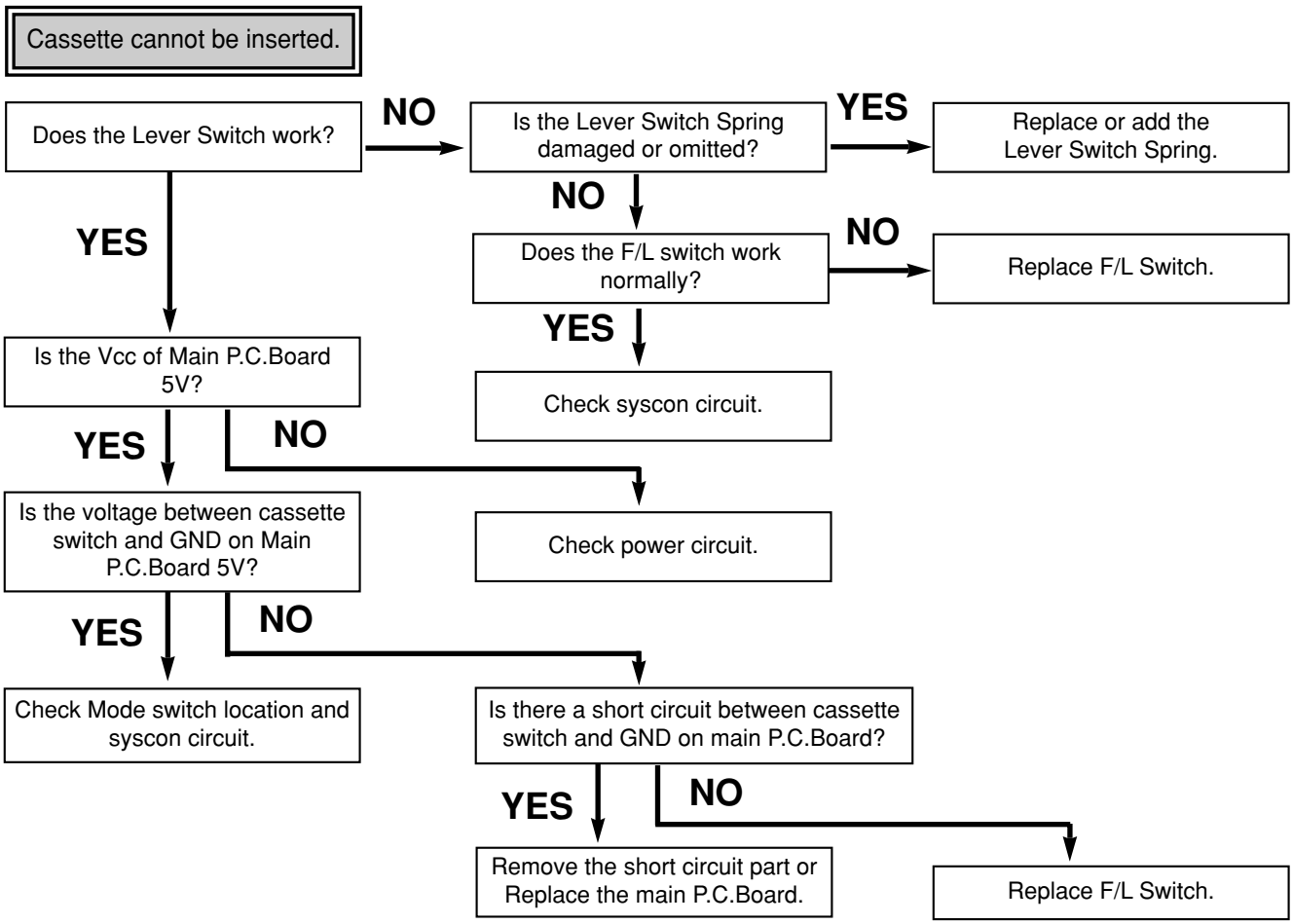
E.


In PB mode Tape Presence not sensed.
Is the Pinch Roller attached to the Capstan Motor Shaft?
NO
Check Alignment positions (page 93)
YES
Does the T/Up Reel turn?
NO
Is the Belt ok?
NO
Replace the Belt.
YES
YES
Check the clutch and the Idler Assembly.
Does the Capstan Motor turn?
YES
Does the Drum Motor turn?
NO
Is the Voltage supplied to the Capstan Motor Vcc1,Vcc2 each?
YES
YES
Are there DPG, DFG Pulses?
Is the terminal voltage of Capstan Motor supplied more than 4V?
NO
Check Servo, Power.
YES
YES
Are the T/Up Supply Reel Sensors ok?
Replace the Capstan Motor.
YES
NO
Check Servo, Syscon.
Is the Vcc voltage of the Drum Motor normal?
NO
Check Syscon, Circuit.
YES
Is the terminal voltage of the Drum Motor more than 2.3V?
NO
Check Syscon, Circuit.
YES
Replace the Drum Motor.

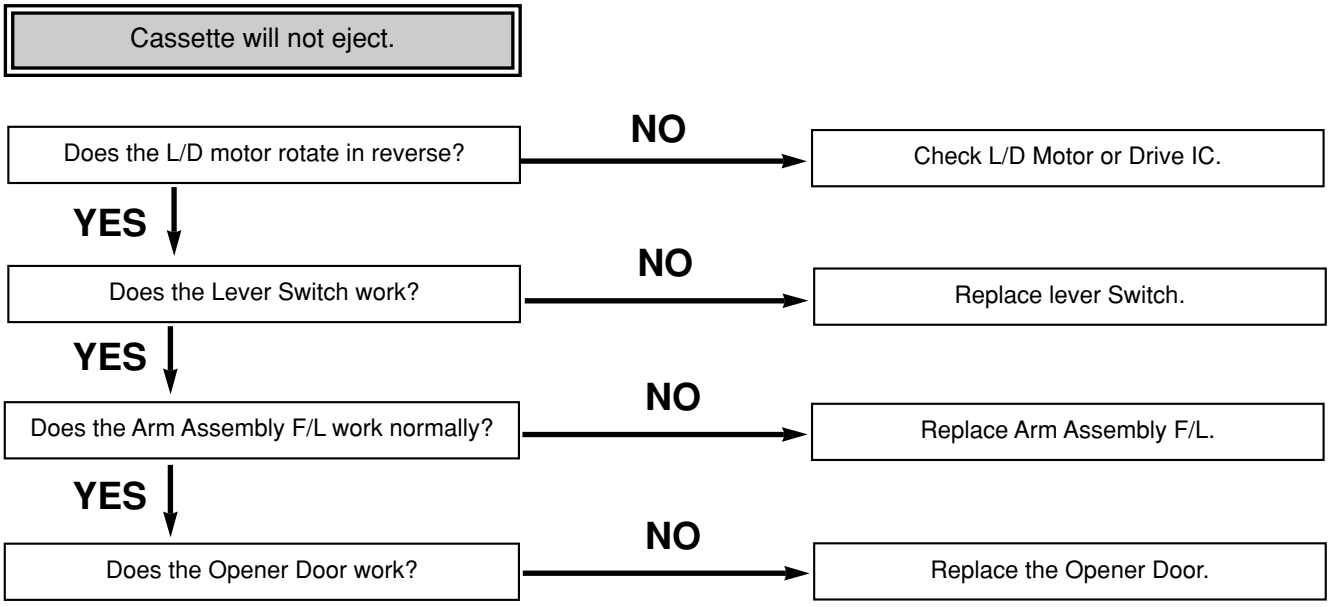
MECHANISM TROUBLESHOOTING GUIDE

2. Front Loading Mechanism

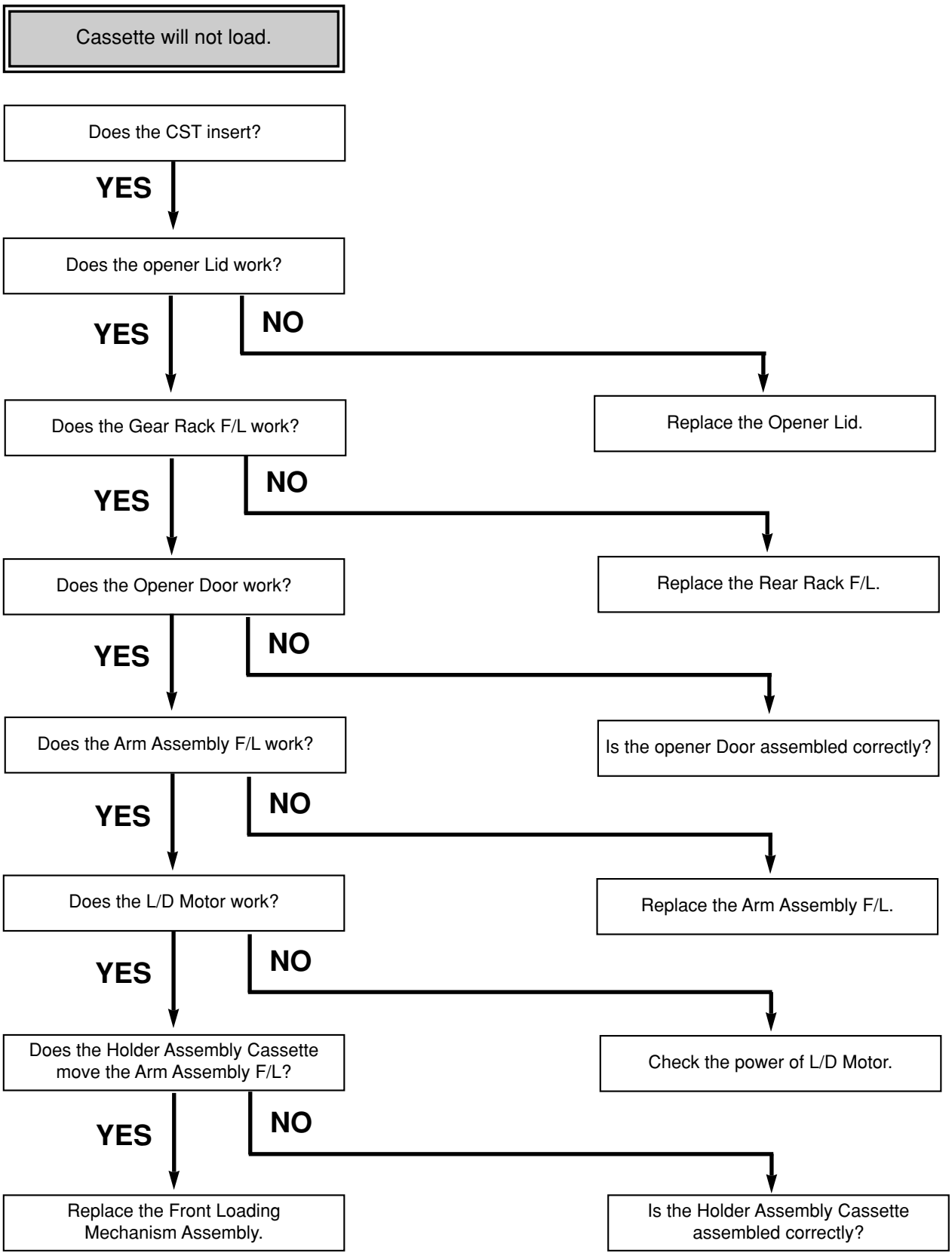
A.



B.



C.


Cassette will not load.
Does the CST insert?
YES
Does the opener Lid work?
YES
NO
Replace the Opener Lid.
Does the Gear Rack F/L work?
YES
NO
Replace the Rear Rack F/L.
Does the Opener Door work?
YES
NO
Is the opener Door assembled correctly?
Does the Arm Assembly F/L work?
YES
NO
Replace the Arm Assembly F/L.
Does the L/D Motor work?
YES
NO
Check the power of L/D Motor.
Does the Holder Assembly Cassette move the Arm Assembly F/L?
YES
NO
Is the Holder Assembly Cassette assembled correctly?
Replace the Front Loading Mechanism Assembly.

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